DEENANATH MANGESHKAR HOSPITAL AND RESEARCH CENTER

RESEARCH: YEAR-IN-REVIEW

1 APRIL 2024 – 31 MARCH 2025

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http://www.dmhospital.org/research-aboutus

DEENANATH MANGESHKAR HOSPITAL AND RESEARCH CENTER, PUNE, M.S., INDIA

PATRON, SUPPORT AND DIRECTOR

Dr. Dhananjay S. Kelkar

ANNUAL REPORT 2024-25 – CONTRIBUTIONS

▪ Preamble, content and design

Dr. Vaijayanti V. Pethe

▪ Data compilation – Clinical Trial research program

Dr. Shweta A. Chitharanjan

▪ Data compilation – In-house research program and PharmD thesis projects

Dr. Amrita P. Prayag

▪ Data compilation – DNB research program

Mr. Raju S. Sawale, Department of Academics

[The data was requested from the Department of Academics]

▪ List of publications [includes original articles, case reports/series, survey studies, clinical communication /editorial, reviews (systematic/narrative/literature), SRMA, consensus articles and clinical trial results]

Dr. Deepchand H. Agre

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Scientific advisory committees: A] For Clinical trial research and IHR review B] For DNB research /thesis review

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Invited articles

1] GBS outbreak in Pune (January – March 2025): Paediatric review at DMH – Dr Sumant Patil

2] Enhancing awareness about genetic counselling and testing for inherited cancers

Dr Gaurav Karve and Dr Aditi Dastane

Covid -19 pandemic

Covid-19 pandemic information [2021-2024] – taken from our previous reports.

Preamble

Research at DMH: Year in review

It is known that the best evidence for clinical practice is often derived from meticulous patient-centred research. Clinical research is an integral part of patient care at DMH – and is embedded in our medical practice. Our clinicians and researchers are driven by a desire to enhance medical knowledge seeking to find answers to questions that often arise from observation. The questions zero in around the best guidance that they can offer to the patients in terms of disease prevention, ways of treatment approaches to mitigate symptoms or change in care. We believe in creating a culture of continuous learning and innovation in ways that have a potential to advance medical science towards improved patient outcomes.

Against this backdrop, we present our research landscape during the past year in various sections of this report. The 3 broad research realms delineated in the report include investigator-initiated research, clinical trials on drugs/devices and DNB projects.

Our sincere thanks and acknowledgements:
As always, we wish to earnestly thank and appreciate the efforts and time of many individuals who have contributed to this report including various clinical department heads, coordinators, clinical fellows, administrators – and especially noteworthy, our research consultants.

We wish the readership a safe 2025!

Sd/-

Dr. Vaijayanti V. Pethe

Assistant Director, Research

Department of Research

Deenanath Mangeshkar Hospital and Research Centre, Pune, Maharashtra, India, www.dmhospital.org

"*Leading the way to the future of personalized medicine through meticulous health research – and best practices at DMHRC"*

OUR MISSION –

Our mission is to promote scientifically sound and ethical health research in the best interest of patient care.

OUR VISION –

Our vision is to advocate and deliver health research to high degree of merit and quality for the benefit of patients at large.

DEPARTMENTAL ORGANIZATION

Our Leadership –

RESEARCH OPERATION AND PRIORITIES

Patron, support and Medical Director [HOI] – Dr. Dhananjay S. Kelkar (2001)

Scientific Lead

Assistant Director, Research – Dr. Vaijayanti V. Pethe (2013)

Regulatory Lead

Member Secretary, EC (CTR) – Dr. Shweta A. Chitharanjan (2002)

Member Secretary, EC (BMHR) – Dr Amrita P. Prayag (2018)

Clinical trial research - CRC team lead

Dr Deepali Patil, (2015)

Dr Tejashree Patole, (2017)

Clinical trial research – start-up specialist

Mrs Varada Bivalkar (2022)

OUR STAFF –

Clinical Trial Research

Mrs Shilpa Hayatnagarkar (Clinical Research Coordinator, 2021)

Dr Prachi Puntambekar (Jr Clinical Research Coordinator, 2022)

Dr Manasi Bakale (Jr Clinical Research Coordinator, 2022)

Ms Harshada Gaurkhede (Jr Clinical Research Coordinator, 2022)

Ms Mrunali Keskar (Jr Clinical Research Coordinator, 2022)

Dr SN Shreyaan (Jr Clinical Research Coordinator, 2023)

Ms Arti Chavan (Jr Clinical Research Coordinator, 2023)

In-House Research

Dr Deepchand Agre (Research Associate, 2021)

In-House Research and Clinical trial research

Mr Sandeep Bhosale (MPW, 2007)

INTERNS (CTR ARM) –

Sejal Kale, Sejal Renavikar, Hari Bodke, Kranti Fulsunder, Utkarsha Gaikwad, Pranav Hajare, Shivshankar Kadam, Suhas Palve, Vaishnavi Kumbhar, Shweta Joshi, Shubhangi Khumbhar, Snehal Jadhav, Vaishnavi Sondar, Swapnali Sawant, Vaibhavi Gholap, Vanaya Manocha, Abhijit Gaikwad, Sakshi Deokar, Padmaja Kambale

ALUMNI - CRCS AND INTERNS (CTR ARM) –

Dr Asmita Shembekar – Dr Smita Sawant – Dr Kirti Jalkote – Mrs Snehal Jadhav – Madhura Shirolkar – Tanuja Deshmukh – Prerna Kulkarni – Kajal Tripathi – Manisha Ghumatkar –Kanchan Khedkar – Shrutika Ghodekar – Vrushali Sawant – Mayuri Patil – Puja Shirsat – Arti Chavan – Komal Choudhari – Harshada Kudale – Akanksha Kale – Roschelle Alex – Dr Manasi Satam – Pranay Kokate– Harshada Bembre – Pooja Shete – Vaishnavi Shinde – Kalpashree Deval – Snehal Albhar – Shreya Tambe – Shivani Jadhav – Anushree Mulay – Bhakti Takawale – Anamika Gavhar – Ms Gauri Pandhure – Priti Nirgudkar – Priyanka Ingole – Apurva Dixit – Bhavna Tadakhe – Madhura Karve –Mayuri Kedar – Vishal Jaybhaye – Sudarshan Devkate – Gaurav Patil – Shivani Kulkarni – Anushka Khadilkar – Kranti Phakhare – Aditi Kadaskar – Abhay Nirmal –Bhagyashri Ingale – Kajal Satpute

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ASCO 2024 AM – theme: *The Art and Science of Cancer Care: From Comfort to Cure.*

Our registrations and accreditations

OUR REGISTRATIONS/ACCREDITATIONS FOR CLINICAL RESEARCH PROGRAMS: IN-HOUSE RESEARCH, CLINICAL TRIAL RESEARCH – AND DNB RESEARCH

IN-HOUSE RESEARCH

DSIR registration validity [3 years] – April 2023 through March 2026

DHR registration validity [5 years] – November (2021 through 2026)

CLINICAL TRIAL RESEARCH

DCGI registration validity [5 years] – February (2022 through 2027)

NABH accreditation validity [3 years] – January (2024 through 2027)

DNB RESEARCH PROGRAM

25 Clinical departments at DMH have been accredited by National Board of Examinations in Medical Sciences (NBEMS), New Delhi - [Broad Speciality – 11, Super Speciality – 11, Fellowship – 03]

The list of departments is included in SOP – BMHR document.

(The data on DNB research projects was requested from the Department of Academics, DMH)

In-house research

A valuable endeavour by our research consultants, students and staff to pursue their research ideas towards advancing medical knowledge in the best interest of patient care and outcomes.

IN-HOUSE RESEARCH AT-A-GLANCE

NUMBER OF PROJECTS REVIEWED BY SAC AND EC IN DIFFERENT THERAPEUTIC AREAS

[IHR_2024_APR_531 – IHR_2025_MAR_560 ; N = 30]

DEPARTMENT	NUMBER OF PROJECTS REVIEWED [N=30]
1] CCM/ICU	3
2] NEUROLOGY	1
3] ID/MICRO	4
4] DERMATOLOGY	1
5] SURG ONCOL	2
6] HEMAT ONCOL	1
7] PEDIATRIC ONCOL	1
8] MED ONCOL	2
9] PICU	1
10] EPILEPSY	2
11] PEDIATRICS	1
12] ORTHOPEDICS	2
13] VOICE	1
14] OPHTHALMOLOGY	1
15] NUTRITION	1
16] SIMULATION	1
17] NEPHROLOGY	1
18] MEDICINE	1
19] GI/ENDOSCOPY	2
20] RESPIRATORY MEDICINE	1

IN-HOUSE RESEARCH AT DMHRC – PROJECTS SUBMITTED FOR REVIEW BY SAC and IEC

[N = 30] | 2024_Apr_531 to 2025_Mar_560 | (CR) collaborative projects

S. No.	DMH project code	PI	Title of the project
1	IHR_2024_Apr_NM_531	Dr Nilesh Mahale	A Retrospective Look at a Novel Treatment for Moderate-Severe non-COVID-19 ARDS.
2	IHR_CR_2024_Apr_RL_532	Dr Radhika Lotlikar	Feasibility of an automated telerehabilitation platform for stroke rehabilitation
3	IHR_2024_Apr_PP_533	Dr Parikshit Prayag	Incidence of paradoxical reaction following antifungal treatment in HIV associated cryptococcal meningitis (CM) in India; a FISF multicenter prospective study.
4	IHR_2024_Apr_PP_534	Dr Parikshit Prayag	FISF multicenter epidemiological study on clinical presentation of non-HIV cryptococcal infections (Cryptococcosis), it's antifungal treatment and outcome in India
5	IHR_2024_Apr_PP_535	Dr Parikshit Prayag	'Rare' non lactose fermenting bacteria: A single center experience from a tertiary care center in Western India.
6	IHR_CR_2024_Apr_DB_536	Dr. Dhanashree Bhide	A Multicentric, Cross-Sectional Study on Utility of Simple Lab Tests in Confirming the Clinical Diagnosis of Vaginal Discharge
7	IHR_2024_May_AB_537	Dr Amruta Beke	Identification of the combination of biomarkers that can accurately differentiate between lung cancer and controls: An exploratory study.
8	IHR_2024_May_SP_538	Dr Sumant Patil	Retrospective analysis of various organisms causing bloodstream, CNS and respiratory infections and their antibiotic sensitivity pattern in the PICU of a tertiary care unit in Pune, India.
9	IHR_CR_2024_May_BP_539	Dr Bharat Purandare	The PLASMID (Pharmacist-Led Antimicrobial Stewardship Model in India) Project: Evaluation of a Pharmacist-Led Antimicrobial Stewardship Program to Improve Appropriate Antimicrobial Use

			for Community-Acquired Pneumonia
10	IHR_2024_June_SJ_540	Dr Sujit Jagtap	To study Clinical profile, radiological features and surgical outcomes of insular epilepsy
11	IHR_CR_2024_June_SK_541	Dr Shilpa Kalane	Effect of introducer type on PICC success rates in extremely low birth weight neonates- A Randomized controlled trial.
12	IHR_CR_2024_July_SJ_542	Dr Sujit Jagtap	Pattern identification and classification on EEG signal of epilepsy patient for early prediction of seizure.
13	IHR_CR_2024_July_SM_543	Dr Sameer Melinkeri	Protocol for a Research Database for Hematopoietic Cell Transplantation, Other Cellular Therapies and Marrow Toxic Injuries – a retro-prospective collaboration with CIBMTR
14	IHR_2024_July_AB_544	Dr Ashish Babhulkar	To assess effectiveness of virtual modalities for rehabilitation as compared to traditional in-person rehabilitation modalities for patients with adhesive capsulitis and rotator cuff tendinosis
15	IHR_2024_July_AB_545	Dr Vrushali Desai	Impact of Two-Day Course on 'Swallowing and Voice' Among Speech Language Pathologists – pre-post comparison
16	IHR_CR_2024_Sept_SK_546	Dr Sheilesh Kanvinde	Develop a machine learning model to predict the risk of cardiotoxicity in pediatric cancer patients treated with anthracycline
17	IHR_CR_2024_Sept_LY_547	Dr Laxmikant Yenge	Modelling of Health states using vocal biomarker analysis of passive audio recordings
18	IHR_2024_Oct_RS_548	Dr Rekha Sachdev	Role of nutrition in women after chemotherapy with breast cancer in Indian women.
19	IHR_2024_Oct_KP_549	Mrs Komal Parab	A Pilot Study to Compare Conventional Manual Vital Sign Monitoring vs. Dozee Monitoring System in a Hospital Ward – a prospective study [Rejected]
20	IHR_2024_Nov_MK_550	Dr Mahesh Kulkarni	A study on Transfemoral Approach in Revision Hip Arthroplasty – A Long term Follow-up [Retrospective study]

21	IHR_2024_Nov_TD_551	Dr Tushar Dighe	To study the financial and social implementation of anaemia treatment in CKD patients
22	IHR_CR_2024_Nov_CD_552	Dr Chetan Deshmukh	Cost Impact Inference & Efficacy of generic Palbociclib in Hormone Receptor positive (HR +ve), Human Epidermal growth factor Receptor 2 negative (HER2-ve) Metastatic Breast Cancer (MBC) patients: Indian perspective
23	IHR_2024_Nov_NM_553	Dr Nilesh Mahalle	To determine the incidence and risk of ventilator-acquired pneumonia in intensive care units (ICUs) associated with the use of acid suppressors for stress ulcer prophylaxis (SUPs).
24	IHR_2024_Nov_PV_554	Dr Parag Vaste	Observational study of persistent inflammatory arthritis in patients of chikungunya fever – Retrospective study
25	IHR_2024_Nov_NM_555	Dr Nilesh Mahalle	Assessing the Efficacy and Safety of Centhaquine in Real-World Hospital Settings for Hypovolemic Shock Management – A resuscitative agent as an adjuvant to SOC.
26	IHR_2025_Jan_VU_556	Dr Vaibhavi Upadhye	Impact of Non-Contact Vital Parameter Monitoring System (Dozee) on Early Detection of Clinical Deterioration in Ward Patients
27	IHR_2025_Jan_AB_557	Dr Amol Bapaye	Safety, technical efficacy and long-term clinical outcomes of endoscopic therapy for foregut Neuroendocrine tumours (NETs)
28	IHR_2025_Jan_AT_558	Dr Anup Tamhankar	Intra-Peritoneal (IP) Chemotherapy as a maintenance treatment for advanced ovarian cancer: Early experience from tertiary care centre in India
29	IHR_2025_Feb_PW_559	Dr Prasad Walimbe	Longitudinal Follow-up and Outcome Analysis in adult amblyopic Subjects Treated With BYNOCS Dichoptic Amblyopia Training- A retrospective study
30	IHR_2025_Mar_HG_560	Dr Harshal Gadhikar	Primary Hyperparathyroidism-Associated Pancreatitis: Experience from a tertiary centre – Retrospective study

PharmD thesis projects reviewed by SAC and EC : April 2024-Mar 2025 - [N = 9]

All students were from Modern College of Pharmacy, Nigdi, Pune

1. **Name of Guide and Department:** Dr. Arun Tirlapur, Department of Nephrology, DMH.

   Title of the project: *Design and Development of a Digital Tool to Evaluate Medication Adherence in Chronic Kidney Disease (CKD) patients.*

2. **Name of Guide and Department:** Dr. Prashant Mishra, Department of Cardiology, DMH.

   Title of the project: *Type A and D personality as a risk predictor of cardiovascular diseases – A comparative study.*

3. **Name of Guide and Department:** Dr. Narendra Javadekar, Department of Internal Medicine, DMH.

   Title of the project: *Antithrombotic Stewardship: To study various drug utilization pattern of antithrombotic agents to enhance safety and effectiveness in patient care.*

4. **Name of Guide and Department:** Dr. Nikhil Sathye, Department of Internal Medicine, DMH.

   Title of the project: *To Assess Knowledge of Food-Drug Interactions: Developing and Validating a Monitoring System in a Tertiary Care Hospital.*

5. **Name of Guide and Department:** Dr. Prashant Mishra, Department of Cardiology, DMH.

   Title of the project: *To investigate the incidence, prevalence and management of drug interactions in cardiac patients, with the goal of enhancing medication safety and optimizing treatment outcomes.*

6. **Name of Guide and Department:** Dr. Ashwini Joshi, Internal Medicine, DMH.

   Title of the project: *To assess the risk factors and prevalence of complications of Type 2 Diabetes Mellitus: A cross-sectional study.*

7. **Name of Guide and Department:** Dr. Sampada Patwardhan, Department of Microbiology, DMH.

   Title of the project: *To study Drug Utilization review of Fluconazole in In-Patient Department of tertiary care hospital.*

8. **Name of Guide and Department:** Dr. Sampada Patwardhan, Department of Microbiology, DMH.

   Title of the project: *Pharmacoeconomic analysis of Echinocandins in a Multi-specialty Hospital*

9. **Name of Guide and Department:** Dr. Sukrut Purandare, Department of Internal Medicine, DMH.

   Title of the project: *Optimizing Medication Dosing in patients with Augmented Renal Clearance: An Observational Analysis of Physician's Behaviour.*

Clinical trial research – sponsored research

Reference:

Clinical trials in global health 2025

https://www.thelancet.com/series-do/clinical-trials

Executive summary [March 2025]

The landscape of clinical trials has undergone significant changes, as highlighted in the current Series of six papers published in *The Lancet Global Health*. The WHO guidance provides a comprehensive framework to enhance clinical trial infrastructure, focusing on patient and community engagement, especially for under-represented populations. Key barriers identified include poor trial design, lack of inclusivity, inadequate infrastructure in low and middle-income countries, and inefficient approval processes. The guidance advocates for risk-proportionate approaches and aims to support local policymakers. The Series aims to strengthen the clinical trial ecosystem, emphasizing ethical research, stakeholder collaboration, and quality improvement through strategic investments. This initiative seeks to promote equity, efficiency, inclusion, and engagement in clinical trials, ultimately improving global health outcomes.

CLINICAL TRIAL RESEARCH AT DMHRC – PROTOCOLS REVIEWED BY SAC and IEC

A] TOTAL NUMBER OF STUDIES REVIEWED – [N = 17]

[CT_2024_Apr_VJ_711 to CT_2025_Mar_PV_727]

PROJECT STATUS	NUMBER OF PROJECTS [N= 17]
Ongoing	08
Pending	08
Rejected/ Terminated	01

Pending status – The projects have not been given final approval in view of lack of either administrative and/or regulatory documents in the context of clinical trials. Some of the documents and items include – Final CTA, EC review fees, final ICFs, CTRI notification, DCGI submission/ approval notification.

B] STATUS OF CLINICAL TRIAL STUDIES – UPDATED AS OF MARCH 2025

Ongoing and inactive projects –

Total number of studies	N=	45
Studies having ongoing patient activities	N=	37
Inactive studies: formal close-out from sponsor awaited	N=	08

C] THERAPEUTIC AREAS OF ONGOING PROJECTS – [N= 37]

THERAPEUTIC AREA	NUMBER OF ONGOING TRIALS [N=37]
Paediatric neurology	1
Cardiology	2
Dermatology	1
Endocrinology	5
Gastroenterology	1
Infectious disease	1
Neurology	6
Oncology	18
Rheumatology	2
Total	37

D] CLOSED-OUT PROJECTS AND THEIR THERAPEUTIC AREAS [N = 18]

THERAPEUTIC AREA	NUMBER OF PROTOCOLS [N=18]
Paediatric neurology	1
Cardiology	2
Endocrinology	1
Epilepsy	1
IVF	1
Neurology	5
Oncology	7
Total	18

DNB research

List of DNB Research Projects – Accepted – 1 April 2024 to 31 March 2025

Sr. No	Name Of Principle Investigator	Name Of Guide / Supervisor	Speciality / Department	Title Of Thesis Protocol
1	Dr. Deshpande Shriya Chandrashekhar	Dr. Shireesh Sathe	Cardiology	Association of lactate at admission and lactate clearance with clinical outcomes in patients with acute coronary syndrome.
2	Dr. Kumbhar Chaitanya Chandrakant	Dr. Harshal Gadhikar	Medical Gastroenterology	Comparison of fibroscan with AST to platelet ratio index (APRI), FIB-4 and BARD score for assessment of fibrosis in patients with metabolic dysfunction associated steatotic liver disease (MASLD).
3	Dr. Kharat Swapnil Narayan	Dr. Prashant Mishra	Cardiology	Association of stress hyperglycemia ratio with clinical outcomes in patients with acute coronary syndrome.
4	Dr. Bharuka Umesh Vinodkumar	Dr. Anusree Prabhakaran	Clinical Hematology	Co-relation of molecular and cytogenetics markers and response to induction chemotherapy in newly diagnosed patients with (AML) Acute Myeloid Leukemia
5	Dr. Harshita Kakoriya	Dr. Amruta Beke	Surgical Oncology	Correlation of extent of surgery in gastric cancer and locoregional recurrence
6	Dr. Maheshkumar	Dr. Dhananjay Kelkar	Surgical Oncology	Correlation between intraoperative technique used and perioperative outcome in patients undergoing open pancreaticoduodenectomy
7	Dr. Deshpande Ruturaj Sadanand	Dr. Sachin Hingmire	Medical Oncology	Prospective observational study of aetiopathogenesis and treatment outcomes of Hepatocellular Carcinoma treated at a tertiary care centre.
8	Dr. Bisen Ankit Rajesh	Dr. Arunkumar Tirlapur	Nephrology	Correlation of frailty with outcomes in haemodialysis patient.
9	Dr. Velip Abhijeet Shamaji	Dr. Rohan Valsangkar	Genito Urinary Surgery	A Prospective comparative study of mini-percutaneous nephrolithotomy (PCNL) using

Sr. No	Name Of Principle Investigator	Name Of Guide / Supervisor	Speciality / Department	Title Of Thesis Protocol
			(Urology)	Pneumatic Lithotripsy and Laser Lithotripsy.
10	Dr. Pandya Poorn Vipulkumar	Dr. Subodh Shivde	Genito Urinary Surgery (Urology)	A prospective observational study of functional outcomes following robot assisted radical prostatectomy.
11	Dr. Wavhal Madhavi Gopal	Dr. Balasaheb Yadavrao Pawar	Critical Care Medicine	Study of clinical outcomes in elderly patients admitted with heart failure in tertiary care intensive care unit – A prospective observational study
12	Dr. Abhishek Dilip Deshmukh	Dr. Shailaja Suresh Chavan	Critical Care Medicine	A study of clinical outcomes of elderly patients of different age groups undergoing multimodality treatment for acute ischemic stroke admitted in tertiary care intensive care unit.
13	Dr. Chate Manda Baliram	Dr. Prasad Vasant Akole	Critical Care Medicine	A prospective observational comparative study of outcomes among elderly patient in two different age groups admitted to an intensive care unit with acute kidney injury
14	Dr. Solanki Anand Kishorbhai	Dr. Pradip Balasaheb Dalvi	Critical Care Medicine	A comparative observational study of outcomes in patients with septic shock of two different age groups admitted in tertiary hospital intensive care unit
15	Dr. Priyamvada Sharma	Dr. Sameer Arvind Jog	Critical Care Medicine	Prospective observational study to compare outcomes in patients with hypoxemic respiratory failure needing invasive mechanical ventilation in two different age groups.
16	Dr. Shruti Jaiswal	Dr. Sameer Arvind Jog	Critical Care Medicine	Prospective observational study to compare outcomes in elderly population with spontaneous intracerebral hemorrhage.
17	Dr. Sengupta Shreejita Pinaki	Dr. Rahul Kulkarni	Neurology	A prospective study of outcome of wake up strokes in a tertiary care hospital.

Sr. No	Name Of Principle Investigator	Name Of Guide / Supervisor	Speciality / Department	Title Of Thesis Protocol
18	Dr. Mohd Azher Ahmed Ansari Mohd Younus Ansari	Dr. Tushar Borde	Neurosurgery	Retro-prospective observational study of correlation of molecular markers and survival outcomes in patients undergoing surgery for high grade gliomas at a single tertiary care centre in western India
19	Dr. Aalok Sandeep Gore	Dr. Parimal Kulkarni	Plastic and Reconstructive Surgery	Retro- prospective study - use of dermal regeneration template with autologous split thickness skin grafting in complex wound reconstruction
20	Dr. Marri Glady Phebe Evangeline	Dr. Prasanna Khare	Anaesthesiology	Comparison of Perineural versus intravenous dexamethasone as adjuncts to Levobupivacaine for Interscalene brachial plexus block in patients undergoing arthroscopic shoulder surgery under General anaesthesia
21	Dr. Tandale Meghana Sugriv	Dr. Devashree Gadgil-Joshi	Radio Diagnosis	Correlation between mammographic findings and histopathological findings in patients categorized as BIRADS 4 - A hospital based Retro-prospective study
22	Dr. Patil Ketan Jagadish	Dr. Anand Shinde	Obstetrics and Gynaecology	A Retrospective study of Primigravida for comparing Maternal and Neonatal outcomes in spontaneous full-term labor with respect to Epidural Analgesia versus No Epidural Analgesia
23	Dr. Abdul Rahman Abdul Basheer	Dr. Bhagyashree Shivde	Anaesthesiology	Comparison between Mccoy laryngoscope and video laryngoscope guided intubation in obese patients scheduled for elective surgery under general anesthesia.
24	Dr. Jasvanth Sharma B.R	Dr. Manjiri Ranade	Anaesthesiology	Prospective randomised comparative study to evaluate safety of preoperative carbohydrate drink in patients undergoing knee arthroplasty by ascertaining gastric emptying using point of care ultrasound
25	Dr. Jahnavi Kumari Sinha	Dr. Jitendra Kshirsagar	Anaesthesiology	A prospective Randomised study to compare Dexamethasone and

Sr. No	Name Of Principle Investigator	Name Of Guide / Supervisor	Speciality / Department	Title Of Thesis Protocol
				Dexmedetomidine as adjuvants to Ropivacaine for perineural Adductor Canal Block in patients undergoing Arthroscopic Anterior Cruciate Ligament Reconstruction.
26	Dr. Vaishnavi Shrikant Wazurkar	Dr. Sumeet Pitkar	Paediatrics	Study of correlation between Pre-extubation ultrasonographic measurement of intracricoid peritubal free space (IPFS) and the occurrence of post extubation airway obstruction in children: A Prospective observational study
27	Dr. Patel Sonaliben Jagdishbhai	Dr. Arundhati Kanade	Obstetrics and Gynaecology	A Retrospective study comparing obstetric outcomes in fresh versus frozen embryo transfer.
28	Dr. Swapnil Ashok Wani	Dr. Shilpa Kalane	Paediatrics	Standardized Nutritional Bundle and Discharge Outcomes in Extremely Low Birth Weight Infants: A Prospective Observational Study.
29	Dr. Ellora Das	Dr. Nilanjan Bhowmick	Otorhinolaryngology (ENT)	The Effect of Nasogastric Tube on pharyngeal phase of Swallow in patients with Neurogenic Dysphagia
30	Dr. Rakshanda Vitthal Chaudhari	Dr. Rashmi Gupchup	Paediatrics	Hyperchloremia and Its Impact on Clinical Outcomes in Pediatric Diabetic Ketoacidosis
31	Dr. Vaishya Henisha Rameshbhai	Dr. Anuradha Wakankar	Obstetrics and Gynaecology	Retroprospective Study on Immune Thrombocytopenia (ITP) in Pregnancy and its effect on Maternal and Fetal Outcome in a tertiary care center
32	Dr. Ajit Kumar Pillai	Dr. Pramod Palhade	Anaesthesiology	Point- of- Care Ultrasonographic Assessment of Gastric Content In Patients Undergoing Laparoscopic Cholecystectomy After Preoperative Oral Carbohydrate Drink: A Prospective, Randomized Comparative Study

Selected publications

Covid-relevant publications

1. Malhotra H, Pramanik R, Srinivas S, Kotwal P, Mehra N, **Kulkarni P**, et al. (March 2025).
Genetic Counselling, Testing, and Management of Hereditary Breast and Ovarian Cancer Syndrome in India: Updated Expert Consensus Recommendations from Indian Society of Medical and Pediatric Oncology.
Indian Journal of Medical and Paediatric Oncology. [DOI https://doi.org/ 10.1055/s-0044-1788727]

Abstract

Introduction: Hereditary breast and ovarian cancer (HBOC) is driven by mutations in BRCA1/2 and related genes. Their understanding is vital to appropriate management of such patients and at-risk families, including counselling and genetic testing. Several important recent advances have made it necessary to revise the previous recommendations we made for India in 2020.

Methods: This consensus document was developed with the authors as key experts in the field. Published evidence, real-world data, and expert interpretation were used by a modified Delphi method to finalize these recommendations.

Results: Detailed description and process for identifying patients at risk, doing their counselling, selecting the right molecular test, interpreting the results, and determining the optimal mode of action to attenuate risk of HOBC or its recurrence have been provided in a clear and lucid manner. Differences between germline and somatic mutations are described. Information from publicly available databases was used to fine-tune the guidelines—as more information had becomes available since the time of writing the first guidelines. Risk of various cancer types and corresponding risk reduction strategies have been explained.

Conclusion: Community oncologists in India, SAARC region, and other low- and middle-income countries should use these guidelines in their clinical practice to optimize genetic counselling, molecular testing, and management of patients with HBOC.

2. Kalra S, Sahoo AK, Shaikh S, **Deshmukh V**, et al. (March 2025)
Evaluation of the Psychosocial Status of Patients With Type 2 Diabetes Mellitus and Their Treating Physicians Using the Glycemic Happiness Scale: A Multicentric, Cross-sectional Study.
Cureus. 17(3): e80209. DOI 10.7759/cureus.80209.

Abstract

Background: The purpose of this study was to evaluate the psychosocial status of patients with type 2 diabetes (T2D) and treating physicians using a novel Glycemic Happiness (GH) scale.

Methods: This was a real-world, prospective, multicentric, cross-sectional observational study. Male and female participants aged ≥ 18 years with a clinical diagnosis of T2D were eligible to take part. Additionally, the physicians with extensive T2D patient experience were enrolled in the study.

Results: The study included a total of 400 participants of T2D and 27 physicians. The patient population consisted of 213 (53.3%) men and 187 (46.7%) women, with a mean age of 54.29 ± 12.05 years. The proportions of patients and physicians who were found to be happy were 50.5% and 90.8%, respectively. A statistically significant difference was found in the mean

value of the GH score of insulin and oral antidiabetic drugs (OAD) for the physician component (P=0.0160). Although no significant difference in GH score was observed between insulin and OAD usage among the patients (P=0.9564), a significant difference was observed for dosage frequency of OAD (Once daily (OD) vs. three times daily (TID) (P=0.0034) and twice daily (BID) vs. TID (P=0.0324)). In the multiple regression analysis, GH in patients was found to be associated with glycated hemoglobin (HbA1c) and postprandial glucose (PPG) values.

Conclusions: High glucose levels and OAD dosage frequency have been negatively associated with GH in patients with T2D. To achieve long-term happiness and well-being in diabetes management, there is a need to focus on various aspects of GH among patients and physicians

3. Bhide D, **Sadhwani M**. (March-April 2025).
Curtain Eyelets for Dermoscopy of Genital Lesions.
Indian Dermatology Online Journal. 16(2):346-7. DOI: 10.4103/idoj.idoj_519_24
Abstract
No abstract available.

4. Tunkl C, Agarwal A, Ramage E, Velez FS, Roushdy T, Ullberg T, Li L, Carbonera LA, Yusof Khan AHK, Ciopleias B, Law ZK, Katsanos AH, Heldner MR, Khan M, Matuja S, Alet MJ, Lagos-Servellón J, Minhas JS, Zuurbier SM, Mosconi MG, **Lotlikar R**, et al. (March 2025)
Telemedicine networks for acute stroke: An analysis of global coverage, gaps, and opportunities.
Int J Stroke. 20(3):297-309. doi: 10.1177/17474930241298450. Epub 2024 Nov 15.
Abstract
Background: Despite the proven efficacy of telestroke in improving clinical outcomes by providing access to specialized expertise and allowing rapid expert hyperacute stroke management and decision-making, detailed operational evidence is scarce, especially for less developed or lower income regions.
Aim: We aimed to map the global telestroke landscape and characterize existing networks.
Methods: We employed a four-tiered approach to comprehensively identify telestroke networks, primarily involving engagement with national stroke experts, stroke societies, and international stroke authorities. A carefully designed questionnaire was then distributed to the leaders of all identified networks to assess these networks' structures, processes, and outcomes.
Results: We identified 254 telestroke networks distributed across 67 countries. High-income countries (HICs) concentrated 175 (69%) of the networks. No evidence of telestroke services was found in 58 (30%) countries. From the identified networks, 88 (34%) completed the survey, being 61 (71%) located in HICs. Network setup was highly heterogeneous, ranging from 17 (22%) networks with more than 20 affiliated hospitals, providing thousands of annual consultations using purpose-built highly specialized technology, to 11 (13%) networks with fewer than 120 consultations annually using generic videoconferencing equipment. Real-time video and image transfer was employed in 64 (75%) networks, while 62 (74%)

conducting quality monitoring. Most networks established in the past 3 years were located in low- and middle-income countries (LMICs).

Conclusion: This comprehensive global survey of telestroke networks found significant variation in network coverage, setup, and technology use. Most services are in HICs, and a few services are in LMICs, although an emerging trend of new networks in these regions marks a pivotal moment in global telestroke care. The wide variation in quality monitoring practices across networks, with many failing to report key performance metrics, underscores the urgent need for standardized, resource-appropriate, quality assurance measures that can be adapted to diverse settings.

5. Taunk K, Jajula S, Bhavsar PP, Choudhari M, Bhanuse S, **Tamhankar A**, Naiya T, Kalita B, Rapole S. (February 2025).

   The prowess of metabolomics in cancer research: current trends, challenges and future perspectives.

   Mol Cell Biochem. 480(2):693-720. doi: 10.1007/s11010-024-05041-w. Epub 2024 May 30.

   Abstract

   Cancer due to its heterogeneous nature and large prevalence has tremendous socioeconomic impacts on populations across the world. Therefore, it is crucial to discover effective panels of biomarkers for diagnosing cancer at an early stage. Cancer leads to alterations in cell growth and differentiation at the molecular level, some of which are very unique. Therefore, comprehending these alterations can aid in a better understanding of the disease pathology and identification of the biomolecules that can serve as effective biomarkers for cancer diagnosis. Metabolites, among other biomolecules of interest, play a key role in the pathophysiology of cancer whose levels are significantly altered while 'reprogramming the energy metabolism', a cellular condition favored in cancer cells which is one of the hallmarks of cancer. Metabolomics, an emerging omics technology has tremendous potential to contribute towards the goal of investigating cancer metabolites or the metabolic alterations during the development of cancer. Diverse metabolites can be screened in a variety of biofluids, and tumor tissues sampled from cancer patients against healthy controls to capture the altered metabolism. In this review, we provide an overview of different metabolomics approaches employed in cancer research and the potential of metabolites as biomarkers for cancer diagnosis. In addition, we discuss the challenges associated with metabolomics-driven cancer research and gaze upon the prospects of this emerging field.

6. **Ranade AS**, Oka GA, Belthur MV, Shah H, Herman MJ, Fernandes JA, et.al. (February 2025).

   An International Consensus on Evaluation and Management of Idiopathic Genu Valgum: A Modified Delphi Survey.

   J Pediatr Orthop. doi: 10.1097/BPO.0000000000002908. Epub ahead of print. PMID: 39901614.

   Abstract

   Background: Idiopathic genu valgum beyond physiological limits may require treatment, which is based on age, growth remaining, and the magnitude of the deformity. There is no

consensus on clinical, or radiologic evaluation, indications, and management of idiopathic genu valgum, which can range from observation to surgical treatment using various modalities. If available, such guidelines will help surgeons offer optimal treatment to their patients. The aim of our study was to establish an expert consensus on the evaluation and treatment of idiopathic genu valgum.

Methods: An international panel of 29 pediatric orthopaedic surgeons from 17 countries with clinical and research experience in the management of limb deformity participated in a modified Delphi survey. Surgeons were provided with patient and deformity characteristics and voted on 46 statements on history, clinical examination, radiographic evaluation, and treatment options for idiopathic genu valgum in round 1. Consensus was defined as when statements received ≥70% votes. Statements that were important but received <70% votes were reworded for clarity in round 2 (n=13).

Results: Consensus was achieved for 28/46 statements and included obtaining a full-length standing radiograph of the lower extremities and measuring joint orientation angles. Participants did not agree to offer surgical treatment based only on the intermalleolar distance. They recommended surgical treatment if the mechanical axis falls in zone 2 or beyond on the lateral side and using guided growth by tension-band plating when the growth remaining is at least 2 years. The panel agreed on performing common peroneal nerve decompression for specific indications such as acute, opening wedge osteotomy of >20 degrees, but not for gradual correction. Consensus was not reached for indications and methods of bone age assessment, treatment when growth remaining is <1 year, indications for implant removal after guided growth in younger children, and the type of osteotomy for acute deformity correction.

Conclusions: We have generated consensus statements to guide the management of idiopathic genu valgum. Statements that lack consensus are areas for future multicenter research.

Level of evidence: Level V.

7. Shah AS, Sadhwani M, Bhide DS, Kulkarni V, Vaidya PP, Patki AH. (February 2025).
Innocence in Disguise: Vulvar Hidradenoma Papilliferum.
Indian Journal of Postgraduate Dermatology. 3(1):52-55. doi: 10.25259/ IJPGD_224_2024

Abstract

The vulvar region contains a high concentration of apocrine, eccrine, anogenital mammary-like glands and pilosebaceous units. Vulvar hidradenomas are benign tumours originating from anogenital mammary-like glands and typically manifest as small, painless nodules on the vulva. They can clinically resemble pyogenic granulomas or granuloma inguinale. The preferred treatment method is local surgical excision. This case report discusses two cases of women diagnosed with vulvar hidradenomas, highlighting their characteristic clinical presentation and management approach. These cases serve as a reminder for clinicians to consider this rare tumour in differential diagnoses of nodular lesion on vulva with beefy red erosive surface, alongside conditions such as sexually transmitted infections and other benign or malignant tumours.

8. Sadhwani M, Kulkarni V, Melinkeri S. (February 2025).

Effectiveness of Oral Psoralen+ UV-A (PUVA) Therapy in the Treatment of Chronic Cutaneous Graft Versus Host Disease (GVHD): A Retrospective, Observational Study Analysis from a Tertiary Care Centre.

Indian Journal of Hematology and Blood Transfusion. 1-6.

Abstract

Graft versus host disease (GVHD) occurs commonly after haematopoietic stem cell transplantation (HSCT). Cutaneous GVHD is a cause of significant morbidity. The use of conventional immunosuppressants leads to increase in the risk of infections and malignancy. Phototherapy is a relatively safe and efficacious alternative for treating chronic GVHD. We aimed to evaluate the effectiveness of psoralen + ultra-violet A (PUVA) therapy in cases of chronic GVHD. We included 10 cases of chronic GVHD, who had undergone HSCT at our centre. A retrospective, observational study analysis was carried out. Parameters like percentage of body surface area involved, percentage reduction in body surface area, number of phototherapy sessions, dose of oral steroid reduced and side effects were evaluated. Out of the total 10 patients, 7 (70%) had clinical features of lichenoid GVHD, while the other 3 (30%) cases had sclerodermatous type of GVHD. The mean time to develop chronic GVHD after bone marrow transplant was 8.25 months. The mean body surface area involved at the time of diagnosis was 53.1%. Seven patients (70%) responded to phototherapy. Five patients (50%) achieved complete remission, while two (20%) had partial remission. One patient (10%) was lost in follow up. One case (10%) died while on PUVA therapy due to relapse of leukaemia. One patient (10%) of lichenoid GVHD relapsed after completion of PUVA therapy. The average number of phototherapy sessions required were 34.6. The average percentage reduction in the dose of oral steroids before and after PUVA therapy was 89.12%. Other immunosuppressants were stopped after an average of 4.57 months in 8 patients. We hereby conclude that PUVA therapy is a much better alternative to the conventional immune suppressing agents for chronic GVHD.

9. Choudhury A, Kulkarni AV, Arora V, Soin AS, **Palnitkar S**, et.al, APASL-ACLF Research Consortium (AARC) for APASL-ACLF working party. (February 2025).

Acute-on-chronic liver failure (ACLF): the 'Kyoto Consensus'-steps from Asia.

Hepatol Int. doi: 10.1007/s12072-024-10773-4. Epub ahead of print. PMID: 39961976.

Abstract

Acute-on-chronic liver failure (ACLF) is a condition associated with high mortality in the absence of liver transplantation. There have been various definitions proposed worldwide. The first consensus report of the working party of the Asian Pacific Association for the Study of the Liver (APASL) set in 2004 on ACLF was published in 2009, and the "APASL ACLF Research Consortium (AARC)" was formed in 2012. The AARC database has prospectively collected nearly 10,500 cases of ACLF from various countries in the Asia-Pacific region. This database has been instrumental in developing the AARC score and grade of ACLF, the concept of the 'Golden Therapeutic Window', the 'transplant window', and plasmapheresis as a treatment modality. Also, the data has been key to identifying pediatric ACLF. The European Association for the Study of Liver-Chronic Liver Failure (EASL CLIF) and the North American Association for the Study of the End Stage Liver Disease (NACSELD) from the West added the concepts of organ failure and infection as precipitants for the

development of ACLF and CLIF-Sequential Organ Failure Assessment (SOFA) and NACSELD scores for prognostication. The Chinese Group on the Study of Severe Hepatitis B (COSSH) added COSSH-ACLF criteria to manage hepatitis b virus-ACLF with and without cirrhosis. The literature supports these definitions to be equally effective in their respective cohorts in identifying patients with high mortality. To overcome the differences and to develop a global consensus, APASL took the initiative and invited the global stakeholders, including opinion leaders from Asia, EASL and AASLD, and other researchers in the field of ACLF to identify the key issues and develop an evidence-based consensus document. The consensus document was presented in a hybrid format at the APASL annual meeting in Kyoto in March 2024. The 'Kyoto APASL Consensus' presented below carries the final recommendations along with the relevant background information and areas requiring future studies.

10. Kakkar B, Kulkarni M, Melinkeri S, Ketkar S, Keripale A. (Jan 2025).
Bombay Group Phenotype or Group O Phenotype: A Serological Dilemma.
Indian Journal of Hematology and Blood Transfusion, 41(1): 207-209
Abstract
No abstract available.

11. Kalra S, Zargar AH, Das AK, Baidya A, **Deshmukh V**, et al. (January 2025).
Prevention and Treatment of Vitamin D Deficiency in India: An Expert Group Consensus.
Indian Journal of Endocrinology and Metabolism. 29(1):13-26.
Abstract
Vitamin D deficiency is highly prevalent in India, yet no standardized guidelines exist for classifying vitamin D status or its prevention and treatment. Even more, there is no consensus specific to vitamin D supplementation for the Indian population, and there are inconsistencies in the cut-off values for deficiency, severe deficiency, and insufficiency across various guidelines, which this evidence-based consensus seeks to resolve, thus guiding healthcare professionals in identifying, preventing, and managing vitamin D deficiency. An expert group of 41 endocrinologists from across India developed the consensus using the DELPHI method, achieving over 90% agreement on all recommendations. The consensus defines vitamin D deficiency, severe deficiency, and insufficiency, recommending supplementation strategies to maintain physiological 25(OH) D levels of 40–60 ng/mL (100–150 nmol/L). Tailored treatment regimens for neonates, infants, children, adolescents, adults, the elderly, pregnant and lactating women, and individuals with co-morbid conditions are provided to ensure optimal health for all age groups in India.

12. Mutalik SD, Hegde SS, Noronha MF, **Kulkarni V**, Nikam B. (January 2025).
Gastric carcinoma associated with a morbid trifecta of skin manifestations.
BMJ Case Reports. 18(1):e264008.
Abstract
No abstract available.

13. Nath D, Hiwale A, **Kurwale N**, Patil C. (January 2025).

Classification of Epileptogenic networks in temporal lobe epilepsy patients in contrast to the healthy controls.

Journal of Integrated Science and Technology. 13(4):1082.

Abstract

This study aims to investigate the classification of individuals with Left Temporal Lobe Epilepsy (LTLE) and Right Temporal Lobe Epilepsy (RTLE) in comparison to Healthy Controls (HC) based on machine learning approaches. The dataset of patients and Healthy Cohorts of resting-state functional magnetic resonance imaging (rs-fMRI) is preprocessed using CONN software which works on MATLAB. Twelve Regions of Interest (ROIs) were selected in CONN. Supervised learning algorithms, particularly the Random Forest Algorithm, were employed for categorizing the connection matrices of the 12 ROIs. The Random Forest Algorithm achieved the highest accuracy during five cross-validation folds, with 83% accuracy in classifying Right Healthy Controls (RHC)-RTLE and 72.10% in classifying Left Healthy Controls (LHC)-LTLE. Feature importance plots generated by the Random Forest Algorithm were utilized to identify critical relationships influencing the categorization, demonstrating distinct connection patterns between individuals with RTLE and RHC and LTLE and LHC, suggesting potential implications for understanding temporal lobe epilepsy.

14. Jathar K, Singh G, Pissurlencar S. (January-March 2025)

Branch retinal artery occlusion and spontaneous vitreous hemorrhage in cavernous hemangioma of the optic disc: A rare case report.

Journal of Clinical Ophthalmology and Research. 13(1):106-110. *DOI:* 10.4103/jcor.jcor_131_24

Abstract

Retinal cavernous hemangioma is a rare benign tumor. We report a case of branch retinal artery occlusion (BRAO) and spontaneous vitreous hemorrhage in cavernous hemangioma of the optic disc. Fundus examination showed superotemporal BRAO with grape-like clusters of aneurysmal dilatations on the optic disc. Fundus fluorescein angiography revealed the absence of vascular leakage in late phase. Surgical management included vitrectomy along with intravitreal antivascular endothelial growth factor injection and endolaser. Regression of hemangioma and resolution of BRAO was noted at 1 month postoperatively. Previous reports suggest that asymptomatic lesions should be observed, while persistent hemorrhages should be managed by vitrectomy.

15. Bajwa S, Aneja K, Rudraraju RT, Machaiah P, Bhalodiya HP, Singh RK, Makwana V, Singh A, Logani V, Chatterjee B, Solanki DS, **Wakankar H**, et al. (December 2024)

Mid-term Outcomes of Patella Resurfacing During Total Knee Arthroplasty (TKA): Clinical, Functional, and Radiographic Insights.

Cureus. 16(12).

Abstract

Aim: The primary objective of the study was to evaluate the mid-term implant survivability, rate of revisions, and clinical and functional outcomes following patella resurfacing during total knee arthroplasty (TKA) utilizing posterior stabilized (PS) total knee system (TKS).

Methods: A prospective, single-arm, multi-center, post-marketing surveillance encompassed patients with end-stage primary knee osteoarthritis (OA) or inflammatory arthritis. The time points of the study included baseline, six weeks, six months, one year, and three years post-operatively. Clinical outcomes included Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score, Short Form-36 questionnaire (SF36), and Knee Society Score (KSS) for quality of life (QoL). Radiographs assessed loosening, patella tracking, and implant longevity. Functional outcomes were assessed by range of motion (ROM).

Result: The study included 74 patients undergoing patella resurfacing during TKA with a PS all-poly component TKS at 10 centers in India. Among the study population, 85% were female, and the average age of the population was 65.13±7.20 years. End-stage OA (70 patients) and inflammatory arthritis (four patients) were the prevalent conditions. Patella sizes used were: 25 mm (n=1), 28 mm (n=29), 31 mm (n=40), and 34 mm (n=4). Primary outcomes showed implant survival was 100% with no revisions after three years. Local soft tissue infections and discomfort affected 3.2%, with no additional adverse events. Radiographs showed wellimplanted patellar components with no misalignment or wear after three years. Secondary outcomes showed a significant three-year increase in mean ROM from 85.50°±15.02° to 122.45°±2.44°. After three years, clinical and functional KSS improved to 90.36±3.72 (baseline: 21.11±14.49) p <0.001 and 97.95±3.67 (baseline: 27.16±13.22) p <0.001, respectively. WOMAC values for pain, stiffness, and difficulty decreased significantly (p <0.001) over the three-year duration. SF-36 evaluating QoL showed substantial improvements (physical functioning, role limitation, and general health).

Conclusion: The study highlights the success of patella resurfacing during TKA, demonstrating excellent implant survival, improved functional outcomes, and QoL over a three-year period.

16. **Deshmukh VC**, Chadha M. (December 2024)

Empowering Physicians for Holistic Wellness in Diabetes Management through Mind-Body Medicine: Implications of the Psycho-Neuro-Immuno-Endocrine/Enteric Concept in Diabetes.

J Assoc Physicians India. 72(12):11-12. doi: 10.59556/japi.72.0758. PMID: 39676179.

Abstract

The psycho-neuro-immuno-endocrine/enteric (PNIE) axis is a fundamental concept in neuroscience, integral to the neuroendocrine system (NES). It encompasses the interactions between behavior, neurology, endocrinology, gut biology, and the immune system. These interactions regulate crucial metabolic processes like glucose, lipid, and protein metabolism, blood pressure, and various homeostatic functions, including blood pressure regulation, thermogenesis and pulmonary hypoxia detection.

17. Deshpande A, Varghese R, Karsiya J, Jha P, **Kulkarni P**. (December 2024)

Pralsetinib: A Drug Review.

Indian Journal of Medical and Paediatric Oncology. DOI: 10.1055/s-0044-1779722.

Abstract

REarranged during Transfection (RET) is a transforming proto-oncogene that codes for the tyrosine kinase receptor. Pralsetinib is an orally bioavailable, selective inhibitor of mutant

forms and fusions involving the RET proto-oncogene. Following administration, pralsetinib limits the upregulation or dysregulation of RET gene mutations. This drug review aimed to explore the pharmacokinetics, pharmacodynamics, clinical indications, contraindications, dosing regimen, dose modifications, adverse drug events, and storage and administration of pralsetinib. This review was curated after exhaustive literature screening of all existing documents available on Google Scholar, PubMed, ScienceDirect, Dimensions, and EBSCO Host, as well as by browsing the Web sites of the U.S. Food and Drug Administration (FDA), drug manuals, and conference presentations, using keywords, such as "Pralsetinib," "RET fusion," and "Gavreto." Additional supporting data were obtained from various abstracts and conference proceedings. Presently, pralsetinib has been granted FDA approval for use in non–small cell lung cancer (NSCLC), metastatic RET fusion-positive NSCLC, and metastatic RET-mutant medullary thyroid cancer.

18. Singh S, Chandan S, Bapaye J, Brar HS, Mohammed S, Kassab LL, Bhat I, Singh S, **Bapaye A**, Yangb D. (December 2024)
Peroral endoscopic myotomy (Z-POEM) versus flexible endoscopic septotomy (FES) for treatment of Zenker's diverticulum: does either make the cut? A systematic review and meta-analysis of outcomes.
Annals of Gastroenterology. 38(1):20–27. doi: 10.20524/aog.2024.0934.

Abstract

Background: Endoscopic treatments of symptomatic Zenker's diverticulum (ZD) include flexible endoscopic septotomy (FES) and, more recently, peroral endoscopic myotomy (Z-POEM). Data comparing these techniques are limited. We conducted a meta-analysis evaluating FES vs. Z-POEM for symptomatic ZD.

Methods: Multiple databases were searched from inception to September 2024. Our primary outcomes were clinical and technical success. Secondary outcomes included adverse events, length of hospital stay (LOS), procedure time, and recurrence. A random-effects model was used, and outcomes were represented as pooled rates, relative risk (RR) and standardized mean difference (SMD), along with 95% confidence intervals (CI).

Results: Seven studies with 580 patients (Z-POEM=274, FES=306) were included. Mean age ranged from 68.9-74.9 years. The diverticulum size was not statistically different between the 2 groups: SMD -3.78 (-11.68 to 4.12), P=0.35. The pooled technical success was similar for Z-POEM and FES: RR 0.99 (95%CI 0.96-1.02; I2 =0%); P=0.4. Clinical success rate was significantly higher for Z-POEM compared to FES: RR 1.11 (95%CI 1.04-1.18; I2 =16); P=0.001. There were no statistically significant differences between the 2 treatment modalities in pooled rate of recurrence, adverse events, LOS or procedural time.

Conclusions: Our analysis shows that Z-POEM and FES in the treatment of symptomatic ZD are both associated with high technical success and a good safety profile, and have comparable procedural times and rates of recurrence. Z-POEM may offer higher rates of clinical success at follow up.

19. **Bhowmick N**, Desai V, Rathinaswamy R. (December 2024)
Clinical Diagnosis of Esophageal Dysphagia Using Transnasal Esophagoscopy: A Case Report.

Indian Journal of Otolaryngology and Head & Neck Surgery. 76:5893-5898. doi: 10.1007/s12070-024-04979-z. Epub 2024 Sep 11.

Abstract

The aim of the present study was three folds; (i) to correlate clinical case history with objective findings of a client presented with sternal discomfort along with odynophagia; (ii) to evaluate the cause for retrosternal discomfort using Functional Esophagoscopy (FE); and (iii) to reaffirm the Cook's (2008) algorithm for clinical diagnosis of esophageal dysphagia in single sitting using Transnasal Esophagoscopy (TNE). A 72 years old male (named 'G') visited a tertiary health care hospital with a complaint of imbalance for past 2 months. Also, had a complaint of pain while swallowing for the past 15 days along with left arm weakness (for past 2 days) and got admitted for treatment. Pertaining to swallowing, a detailed case history was taken and Fiber-optic endoscopic evaluation of swallowing (FEES) was performed to evaluate swallowing safety functions using digital swallowing workstation (KAYPENTAX, New Jersy, USA). A large growth was noticed in the lower border of esophagous using TNE in this patient. The oral, oro-pharyngeal, and pharyngeal phase of swallowing was intact. Esophageal phase of swallowing revealed reduced peristaltic movement including a mass lesion observed in client 'G' from TNE procedure. Clinical correlation of objective findings in this client corroborated well with history. Visualization studies including TNE can be used safely, comfortably in OPD basis without any anesthesia would be few advantages of TNE procedure. Even lesions at lower end of esophagus can be detected using TNE and it is concluded that the symptom retro-sternal discomfort might be clinically correlated with history and objectively determined by TNE procedure as esophageal dysphagia due to structural lesion. Also, algorithm of Cook's (2008) guides the investigation procedure quickly in a single sitting. Therefore, clinical history about patient is imperative that accurately guides further in terms of patient's care for assessment and treatment.

20. Sethi B, Seshadri K, **Deshmukh V**, Unnikrishnan AG, Baruah M, Phatak S, Ghosal S, Chittawar S, Aggarwal K, Bharath HS, Sada P. (November 2024)

Harnessing Digital Initiatives for Improved Health Outcomes in Diabetes Management: An Observational Patient Program.

Cureus. 16(11):e73093. DOI 10.7759/cureus.73093.

Abstract

Introduction: Patients with diabetes have easy access to a wide range of digital applications that may help with self-management and lower barriers; however, robust evidence of their effectiveness remains somewhat elusive. Zyla is a medical artificial intelligence (AI)-based personalized care management app that assists the treating physician in improving the standard of patient care by offering the patients comprehensive and individualized care. This preliminary evaluation of data collected through the Zyla app aims to understand the impact of diabetes disease outcomes among patients subscribed to this app.

Methods: This was a retrospective, observational program conducted through the Zyla app in the calendar year 2020. The Zyla app's objective is to assist the treating physician in improving the standard of patient care by giving them the choice of assembling a personalized team (consisting of clinical nutritionists, physiotherapists, and counselors over a virtual platform) that can offer patients comprehensive and individualized care. Data on

parameters like glycated hemoglobin (HbA1c), fasting blood sugar (FBS), postprandial glucose (PPG), serum creatinine (SC), total cholesterol (TC), triglycerides (TG), high-density lipoprotein cholesterol (HDL-C) and low-density lipoprotein cholesterol (LDL-C) were collected through the Zyla app. Clinical outcomes assessed were the change from baseline to last reported levels of the mentioned parameters and are reported using descriptive analysis.

Results: The glycemic control parameters, HbA1c (change from baseline (CFB): -1.08), FBS (CFB: -15.93), and PPG levels (-18.42), were significantly lower ($P<0.0001$) at the last assessment compared with baseline. For the lipid profile, levels of TGs ($P<0.0001$) and TC ($P = 0.0037$) were significantly lower compared with baseline, while HDL-C levels were comparatively higher (CFB: 0.68) and LDL-C levels were lower (CFB:11.60), however non-significant. Serum creatinine was also lower compared to baseline (CFB: -0.25); however, the difference was not statistically significant.

Conclusions: A significant improvement in all glycemic parameters was seen with the use of the Zyla app along with numerical improvements in kidney function parameters and cholesterol status among patients. These preliminary findings warrant further rigorous studies to validate the impact of medical apps in the management of diabetics in India.

21. Xue Y, Wang S, Hu J, Li W, Li F, **Bhatia A**, Li P, Yin Y, Duan F, Wei Q. (November 2024) *Direct Repair of Ruptured Nerve Stump to Middle Trunk for Restoration of Extrinsic Finger Extension in Total Brachial Plexus Injuries.*
Plastic and Reconstructive Surgery. 154(5):939e-48e. DOI: 10.1097/PRS.0000000000011306.

Abstract

Background: Attempts to restore independent hand function in total brachial plexus injuries (TBPIs) have often failed due to inconsistent results of finger extension reconstruction. An innovative technique is described to achieve this effect by direct neurorrhaphy of residual (ruptured) roots with the middle trunk.

Methods: Direct coaptation of the ruptured roots to the middle trunk and, simultaneously, transferring the anterior division of the middle trunk to the posterior division of the lower trunk was performed in 64 patients with TBPI. The return of extension of the elbow, wrist, and fingers was monitored.

Results: Excellent and good muscle strength of finger extension were noted in 45.3% of cases. The patients were divided into group A (>32 years) and group B (≤32 years) according to receiver operating characteristic curve analysis. The difference of excellent and good rates of finger and wrist extension muscle strengths between the 2 groups was statistically significant ($\chi2 = 4.635$, $P = 0.031$; $\chi2 = 6.615$, $P = 0.010$).

Conclusions: Direct neurorrhaphy of ruptured nerve root stumps with the middle trunk could achieve satisfactory results for finger extension in TBPI for patients ≤32 years old. Long nerve defects (4 to 6.5 cm) could be overcome by freeing the nerve and adducting the arm against the trunk. (Plast. Reconstr. Surg. 154: 939e, 2024.)

CLINICAL QUESTION/LEVEL OF EVIDENCE: Risk, III.

22. Shrigiriwar A, Mony S, Fayyaz F, Onimaru M, Monachese M, Zhang L, Corre F, Azmeera P, Wu H, Wu CCH, Choi K, Gandhi A, Chalikonda D, Keane MG, Ghandour B, Villamarin-

Corrales J, Schlachterman A, Tinto RR, Arévalo FE, Arbizu EA, **Bapaye A**, et al. (November 2024)

Clinical outcomes of peroral endoscopic myotomy with and without septotomy for management of epiphrenic diverticula: an international multicenter experience (with video).

Gastrointest Endosc. 100(5):840-848.e4. doi: 10.1016/j.gie.2024.05.010. Epub 2024 May 23. PMID: 38795736.

Abstract

Background and aims: There are few data favoring the need for septotomy at the time of peroral endoscopic myotomy (POEM) or if POEM alone is sufficient. Our aim was to compare POEM outcomes with and without septotomy (POEM+S or POEM-S) in patients with symptomatic epiphrenic diverticula (ED) and an underlying motility disorder.

Methods: This was an international, multicenter retrospective study involving 21 centers between January 2014 and January 2023. Patients with ED and an underlying motility disorder who underwent POEM were included. The primary outcome was clinical success (Eckardt score [ES] ≤3 or a 1-point drop in ES for patients with baseline ES <3) without the need for repeat surgical/endoscopic interventions during follow-up.

Results: A total of 85 patients (mean age, 64.29 ± 17.1 years; 32 [37.6%] female) with ED and underlying motility disorder underwent POEM+S (n = 47) or POEM-S (n = 38). Patients in the POEM+S group had a significantly higher mean pre-POEM ES (7.3 ± 2.1 vs 5.8 ± 2; P = .002). The most common indication for POEM was achalasia (51% in the POEM+S cohort and 51.8% in the POEM-S cohort; P = .7). A posterior approach was favored in the POEM+S group (76.6% vs 52.6%; P = .02). A similar rate of technical success was seen in both groups (97.9% vs 100%; P = .1). The rate of adverse events was similar between the 2 cohorts (4.2% vs 8.1%; P = .6). The median length of hospital stay after POEM-S was significantly longer compared with POEM+S (2 days [interquartile range (IQR), 1-4 days] vs 1 day [IQR, 1-2 days]; P = .005). Clinical success was equivalent between the 2 groups (83% vs 86.8%; P = .6) at a median follow-up duration of 8 months (IQR, 3-19 months).

Conclusions: In patients with ED and an underlying motility disorder, both POEM+S and POEM-S are equally safe and effective, with similar procedure duration and a low recurrence rate at short-term follow-up. Future comparative prospective studies with long-term follow-up are required to validate these findings.

23. Prabhash K, **Deshmukh C**, Malhotra H, Sharma A, Jain M, et.al. (November 2024)

Efficacy and Safety of Biosimilar Cetuximab Versus Innovator Cetuximab in Indian Patients With Head and Neck Cancer: A Multicenter, Randomized, Double-Blind, Phase III Trial.

JCO Glob Oncol. 10:e2400059. doi: 10.1200/GO.24.00059. Epub 2024 Nov 14. PMID: 39541562.

Abstract

Purpose: Squamous cell carcinoma of the head and neck (SCCHN) is the sixth most common cancer, with approximately 225,419 new cases with over 125,000 deaths annually in India. This trial compared the efficacy and safety of biosimilar cetuximab versus innovator cetuximab (IC) in combination with platinum-based chemotherapy in patients with recurrent locoregional or metastatic SCCHN.

Methods: This phase III trial is a multicenter, randomized, double-blind and parallel group study performed in Indian patients with recurrent locoregional or metastatic SCCHN. Patients were randomly assigned in 2:1 ratio to receive biosimilar cetuximab and IC in combination with cisplatin and fluorouracil via intravenous infusions. The primary end points were disease control rate (DCR) and overall response rate (ORR) as per response evaluation criteria in solid tumors version 1.1. The secondary end points included pharmacokinetics (PK), immunogenicity, safety, and tolerability.
Results: Of 180 patients enrolled, 120 patients received biosimilar cetuximab and 60 patients received IC treatment. No significant statistical difference was observed in the primary outcomes between two groups. Treatment difference in DCR and ORR response was found to be -5.21 (90% CI, -8.94 to -1.48) and -4.79 (90% CI, -19.42 to 9.84), respectively, indicating noninferiority to reference product. The incidence of treatment-emergent adverse events (AEs; biosimilar cetuximab: 89.2% v IC: 91.7%; P = .8364) and serious AEs (biosimilar cetuximab: 23.3% v IC: 13.3%; P = .0603) and PK parameters were comparable between treatment groups. The immunogenicity findings showed higher incidence of anticetuximab antibodies in the biosimilar cetuximab group compared with the IC group at the end of Study.
Conclusion: The findings of this study demonstrated noninferiority along with comparable PK, safety, and immunogenicity of biosimilar cetuximab and IC in patients with recurrent or metastatic SCCHN.

24. Punjabi D, Joshi DS, Khandelwal V. (October- December 2024)
Phacoemulsification with Negative Power IOL Implantation in Pathological Myopia: A Life-changing Procedure.
Delhi Journal of Ophthalmology. 34(4):309-311. *DOI:* 10.4103/DLJO.DLJO_135_24
Abstract
Pathological myopia refers to a spherical equivalent of −8.00 D or more or axial length of 32.5 mm or more. Pathological myopia can lead to complications of the posterior segment such as retinal detachment and staphyloma in long term. Cataract in a high myope can significantly affect the quality of life as it can hamper routine activities of individuals. We report a case of dense cataract in a patient with pathological myopia who underwent uneventful phacoemulsification with negative power Intraocular lens (IOL) implantation after meticulous planning.

25. Bhuskute MV, **Athavale SR**, Nagda SJ. (October 2024)
Perception of Faculty and Postgraduate Students on Mini-CEX as an Assessment Tool in Prosthodontics.
Journal of Health Professions Education and Innovation. 1(3):15-26. DOI: 10.21608/JHPEI.2024.285780.1024
Abstract
Purpose: In an attempt to make post graduate training competency based, there is a need to introduce formative assessment methods as a part of the post graduate program. Mini-CEX is a valid formative assessment tool that fills the lacunae of traditional assessment methods to a certain extent. This study aimed to raise awareness among faculty and postgraduate students about Mini-CEX. It also aimed to analyze the perception of faculty members and students

about the use of Mini-CEX as an assessment tool in Prosthodontics. **Method:** Six postgraduate students pursuing MDS in Prosthodontics underwent six mini-clinical encounters after being sensitized towards Mini-CEX. Four teaching faculty members performed the roles of assessors. Assessors rated the performance by directly observing the students on parameters mentioned in a modified assessment form developed for this study. A systematic feedback session immediately followed each Mini-CEX encounter. Faculty members and student`s perception was recorded on a 5-point Likert scale. **Results:** All the assessors (100%) agree that direct observation during clinical examination is helpful and immediate feedback provided motivates students for further learning. All the assessors perceive that Mini-CEX will help to improve performance in university exams and that they will use the tool in the future. All the students (100%) agree that Mini-CEX helps to improve communication skills and helps in a better understanding of patient management. **Conclusion:** Mini-CEX can be used as a formative assessment tool that can motivate students to further learning based on the feedback received.

26. Majjigudda RA, Menon P, Gupte S, **Dikshit V**, Kulkarni V, Mane S, Tamhankar PM, Tamhankar P. (October 2024)

A Chromosomal Microarray Detects Microdeletion at Chromosome Locus 11p14. 3-p12 Leading to Wilms Tumor, Aniridia, Genitourinary Anomalies, and Mental Retardation (WAGR) Syndrome.

Cureus. 16(10). DOI: 10.7759/cureus.72479

Abstract

The short form of the term "WAGR syndrome" denotes susceptibility to Wilms tumor, absence of irises, genital and urinary anomalies, and growth/development retardation. It is also called 11p deletion syndrome since varying amounts of the short arm of chromosome 11 are found deleted in these patients. The earliest presenting symptom can be undescended testes detected at birth or nystagmus, which can bring attention to the aniridia by a physician. Recognition of this disorder is important for surveilling Wilms tumor, an embryonal cancer of the kidney. A genetic diagnosis is possible by using a chromosomal microarray, fluorescent in situ hybridization, or multiplex ligation-dependent probe amplification (MLPA). The inheritance is autosomal dominant and, in most cases, the deletion is sporadic/denovo (not inherited from parents). We describe a male child with Wilm's tumor, aniridia, genitourinary anomalies, and mental retardation (WAGR) syndrome due to a microdeletion on chromosome 11 {arr[GRCh38]11p14.3p12(22,560,576_38,466,045)x1}.

27. **Ansari J**, Bapaye H, Shah J, **Raina H**, **Gandhi A**, Bapaye J, **BR A, Pagadapelli AA, Bapaye A.** (October 2024)

Clinical audit of endoscopic sub-mucosal dissection performed for complex lateral spreading colorectal tumors from a region non-endemic for colorectal cancer.

Indian Journal of Gastroenterology. 43(5):1002-11. https://doi.org/10.1007/s12664-024-01631-0

Abstract

Background: Endoscopic resection is currently the treatment of choice for laterally spreading tumors (LSTs). Endoscopic sub-mucosal dissection (ESD) can achieve higher enbloc resection and R0 resection, albeit at a slightly higher risk of complications. Given

scarce data on ESD from India, we performed a retrospective analysis of our experience with colorectal ESD (CR-ESD) to know its clinical efcacy and complications as well as to assess the learning curve of CR-ESD in non-endemic-areas.

Methods: Retrospective analysis of prospectively maintained datasheet performed. All patients with large (>2cm), complex or recurrent colorectal LST who underwent ESD at our center between 2012 and 2021 were included in the study. Various baseline lesion-related parameters, procedure-related parameters, enbloc resection (ER) rates, R0 margins and adverse event rates were retrieved. CUSUM analysis was performed to calculate the minimum required procedures to achieve competency in CR-ESD.

Results: Total 149 patients were included in the study; mean patient age was 61.36±18.21 years. Most patients had lesions in rectum (n=102; 68.5%) followed by sigmoid colon (n=25; 16.8%). The mean lesion size was 46.62 ± 25.46 mm and the mean procedure duration for ESD was 219.30 ± 150.05 min. ER was achieved in 94.6% of lesions. R0 resection was achieved in 132 patients (88.6%). Overall, six (4%) adverse events were noted, of which one required surgical intervention. As many as 105 patients (70.5%) had adenomatous lesions on histology. Seventy-four patients underwent follow-up colonoscopy, of which three had a recurrence of adenomatous lesions and fve had post-resection stricture requiring endoscopic dilation. CUSUM curve analysis calculated the learning curve for ESD was 47 resections for ER and 55 for the occurrence of AEs, with a composite CUSUM at 47 procedures.

Conclusion: CR-ESD even in non-endemic area is associated with high en bloc resection rates, R0 resection rates and acceptable complication profle. Approximately 50 cases of CR-ESD are required to achieve competency.

28. Noronha V, Rao AR, Pillai A, Kumar A, Rajappa S, Kapoor A, Mishra BK, Gupta T, Desai C, Pavithran K, Goel A, **Hingmire S**, et.al. (October 2024)
Prevalence and types of cancer in older Indians: A multicentric observational study across 17 institutions in India.
Cancer Epidemiology. 92:102628. https://doi.org/10.1016/j.canep.2024.102628

Abstract

The global demographic and epidemiological transition have led to a rapidly increasing burden of cancer, particularly among older adults. There are scant data on the prevalence and demographic pattern of cancer in older Indian persons. This was a multicentric observational study conducted between January 2019 and December 2020. Data were retrieved from existing electronic databases to gather information on two key variables: the total number of patients registered with oncologists and the number of patients aged 60 years and above. The primary objective was to determine the percentage of older adults among patients with cancer served by these hospitals. Secondary objectives included understanding the prevalence of different types of cancer in the older population, and the sex- and geographic distribution of cancer in older Indian patients. We included 272,488 patients with cancer from 17 institutes across India. Among them, 97,962 individuals (36 %) were aged 60 years and above. The proportion of older adults varied between 20.6 % and 53.6 % across the participating institutes. The median age of the older patients with cancer was 67 (interquartile range, 63–72) years. Of the 54,281 patients for whom the details regarding sex were available, 32,243 (59.4 %) were male. Of the 56,903 older patients, head and neck malignancies were the most

prevalent, accounting for 11,158 cases (19.6 %), followed by breast cancer (6260 cases, 11 %), genitourinary cancers (6242 cases, 10.9 %), lung cancers (6082 cases, 10.7 %), hepatopancreaticobiliary (6074, 10.7 %), and hematological malignancies (5226 cases, 9.2 %). Over one-third of Indian patients with cancer are aged 60 years and above, with a male predominance. Head and neck, breast, and genitourinary cancers are the most prevalent in this age group. Characterizing the burden of cancer in older adults is crucial to enable tailored interventions and additional research to improve the care and support for this vulnerable population.

29. Sangewar VS, Joshi DS, Punjabi DY. (October- December 2024)
Subconjunctival foreign body mimicking uveal tissue prolapse.
Indian Journal of Ophthalmology-Case Reports. 4(4):840-1. *DOI:* 10.4103/IJO.IJO_1627_24
Abstract
Subconjunctival foreign body is a foreign object that gets embedded beneath the conjunctiva. As the conjunctiva is a thin and transparent tissue, it is more prone to foreign body penetration, even with trivial trauma. In a suspected case of subconjunctival foreign body, we should exclude open globe injuries by doing Seidel's test. We present a case of 3 year old child who presented with subconjunctival metallic foreign body, which was mimicking uveal tissue prolapse.

30. Gandhi S, Saindani S, Mundalik R. (October 2024)
Adult Thornwalt Cyst: A Rare Case Report.
Indian Journal of Otolaryngology and Head & Neck Surgery. 76(5):4877-4880. https://doi.org/10.1007/s12070-024-04949-5
Abstract
Nasopharyngeal cysts are rare benign entity, smaller in size and usually asymptomatic. They are mostly diagnosed incidentally on MRI. Larger cysts commonly presents with spasmodic and obstructive symptoms. Thornwaldt cysts are congenital cysts originating from the mid-line of the nasopharynx just above the upper border of the superior constrictor muscle. They represent primitive communication between notochord remnants and the pharyngeal endoderm. We report this case because of its unique presentation in a 35 year old male. Patient presented with nasal blockage, nasal discharge, snoring, ear pain and aural fullness, intermittent neck pain and neck stifness. Preoperative evaluation included diagnostic nasal endoscopy (DNE) and Magnetic resonance imaging (MRI-scan). A large cystic mass of size 2.8 cm×3 cm was diagnosed on DNE and MRI. Transnasal Marsupialisation and excision of the cyst was planned using powered instruments. Post operatively, patient noticed marked improvement in the obstructive symptoms. Regular follow up was done 6 monthly for 2 years. No recurrence was noted on DNE. Although a rare pathology in adulthood, it should be kept as a diferential diagnosis for cervical pain and neck stifness.

31. Bapaye A, Yewale R, Kulkarni A. (October 2024)
Enemy at the Gates! Can Intelligent Warfare (Artificial Intelligence) help India strategize, implement colorectal cancer screening?.
Indian J Gastroenterol. 43(5):869-871. doi: 10.1007/s12664-024-01689-w. PMID: 39259449.
Abstract

No abstract available.

32. Shah U, Rathore C, Radhakrishnan K, Baheti N, Kadaba S, Sahu A, Alladi S, **Chitnis S**, George A, Bansal AR, Murthy JMK; National Epilepsy Surgery Support Activity Network (NESSAN). (October 2024)
A survey of the prevalence and patterns of neuropsychological assessment practices across epilepsy surgery centers in India: Toward establishing a national guideline.
Epilepsia Open. 9(5):1670-1684. doi: 10.1002/epi4.13005. Epub 2024 Jul 16. PMID: 39012159; PMCID: PMC11450667.
Abstract
Neuropsychology plays an important role in optimizing epilepsy management, but there are no practice guidelines for low- and middle-income countries with emerging services. The National Epilepsy Surgery Support Activity Network (NESSAN), a national working group that supports and optimizes epilepsy surgery programs in India, explored the present status of pre- and post epilepsy surgery neuropsychological assessment practices across India as an initial step in developing national evidence-based test guidelines. An online survey was conducted using two questionnaires, one for neurologists and the second for neuropsychologists and speech-language pathologists working in epilepsy surgery centers. The questions to neurologists covered the setting, description, and nature of the neuropsychology services provided for adults and children as part of the epilepsy surgery program, and their perceptions about the importance and indications for neuropsychological assessment in epilepsy surgery. The questions to neuropsychologists inquired about their qualifications and training, pre- and postsurgical assessment procedures, and domain-specific cognitive tests and scales for mood, quality of life, and language evaluations. Forty-three centers responded, and neuropsychology services were available at three fourth of the centers, but a dedicated full-time neuropsychologist was available in only 16% of centers. Ninety percent of the neurologists considered neuropsychological evaluation an indispensable part of presurgical evaluation. However, only a few of them believed that the results influenced their decision about the extent of resection and ruling against surgery. The survey found considerable heterogeneity in terms of qualifications and training of neuropsychologists, evaluation procedures, test protocols, and normative data that will need to be harmonized to ensure uniform practice across the country. We believe that the results from this survey provide a road map for implementing measures to minimize existing inadequacies and harmonize neuropsychology services in India and as well as in other countries with emerging neuropsychology services.

33. Machaiah PK, Bajwa S, Rudraraju RT, Aneja K, Bhalodiya HP, **Wakankar H**, et al. (October 2024)
Comparative mid-term evaluation of unilateral and bilateral total knee arthroplasty utilizing metal-backed components: An assessment of functional and clinical outcomes.
Journal of Orthopaedic Reports. 4(2025):100507. https://doi.org/10.1016/j.jorep.2024.100507
Abstract

Objective: This prospective, post-marketing surveillance (PMS) study (Freedom 400) aimed to evaluate the clinical and functional outcomes of both unilateral and bilateral total knee arthroplasty (TKA) utilizing cruciate retaining/posterior stabilized (CR/PS) implants with metal-backed components (MBC).
Methods: Between November 2016 to January 2019, 408 patients underwent either unilateral or bilateral TKA at ten centers across India. Patients with primary end-stage osteoarthritis (OA) or inflammatory arthritis were included whereas, revision TKA patients were excluded from the study. Primary endpoints were 3-year implant survivorship and revision rates, with secondary endpoints including range of motion (ROM), Knee Society Score (KSS), and quality of life (QoL) assessed through WOMAC and SF-36 at 6 weeks, 6 months, 1- and 3 years.
Results: The study comprised 242 unilateral and 166 bilateral TKA patients, with an average age of 65.13 ± 8.35 and 64.34 ± 7.25 years, respectively. Both groups exhibited a mean body mass index of 27.13 ± 4.73 kg/m2 and 27.80 ± 4.41 kg/m2. Female patients dominated the groups: 78.1 % and 86.75 % respectively, and the primary diagnosis was OA: 97.11 % and 96.39 %, respectively. Significant ROM improvement was observed in both groups ($p < 0.001$). Notable improvement was seen from baseline in mean clinical KSS (bilateral: 33.28 ± 15.84 to 91.06 ± 8.52, $p < 0.001$; unilateral: 31.26 ± 15.7 to 92.43 ± 8.07) and functional KSS (bilateral: 30.17 ± 21.19 to 98.50 ± 4.08, $p < 0.001$; unilateral: 26.59 ± 21.25 to 98.41 ± 4.33, $p < 0.001$) at 3 years. Baseline WOMAC scores among both the groups showed higher pre-operative values (25.78 and 23.91) which significantly lowered for pain (scores: 1.16 and 1.46), stiffness (scores: 0.53 and 0.68) and physical function (scores: 2.89 and 3.1) at 3 years indicating improved QoL. Similar significant trend was noted for SF-36 assessment ($p < 0.001$) in both the groups.
Conclusion: This PMS study concluded that unilateral and bilateral TKA using MBC yielded good outcomes and there was a significant improvement in ROM, KSS scores and QoL in patients with osteoarthritis-associated joint degeneration.

34. **Pagadapelli AA**, Shah J, **Yewale R, Pujari R, Bapaye A**. (September 2024)
Peroral endoscopic myotomy plus natural orifice transluminal endoscopic wrap release for dysphagia after laparoscopic Heller myotomy and Dor fundoplication.
VideoGIE. 10(1):24-27. doi: 10.1016/j.vgie.2024.09.005. PMID: 39925398; PMCID: PMC11806425.
Abstract
No abstract available.

35. **Khaladkar SM**, Pandey AA. (September 2024)
Atypical intrapancreatic course of splenic vein: a rare anatomical variant.
BMJ Case Reports. 17(9):e261280. DOI:10.1136/bcr-2024-261280.
Abstract
No abstract available.

36. Vaishnav D, Gandhi S, Bansode S. (September 2024)
Our Experience with EXIT Procedures: A Case Series.

Indian Journal of Otolaryngology and Head & Neck Surgery. 1-5. https://doi.org/10.1007/s12070-024-05034-7

Abstract

Respiratory distress in neonates presents challenges necessitating immediate airway management. This case series explores two instances of Ex-Utero Intra Partum Procedure (EXIT) for newborns with congenital airway obstructions. Case 1 describes a 34-year-old gravida 2 para 1 at 35+1 weeks with micrognathia. Due to failed intubation, an EXIT tracheostomy was performed successfully within 18 min, maintaining foetal oxygenation through utero-placental circulation. Case 2 involves a 29-year-old primigravida at 34+1 weeks with Congenital High Airway Obstruction Syndrome (CHAOS), where a planned EXIT tracheostomy was executed. These cases highlight the crucial role of multidisciplinary teams comprising obstetricians, anaesthetists, neonatologists, and specialized surgeons. Discussion emphasizes early prenatal diagnosis, meticulous planning, and parental counselling. The EXIT procedure is crucial for various indications such as oropharyngeal masses and CHAOS. Challenges like fetal tissue pliability and maintaining utero-placental circulation are addressed. Early detection, pathology understanding, and thorough planning are vital for successful outcomes. Psychological support for parents and a multidisciplinary approach ensure optimal maternal and neonatal outcomes. This series underscores the significance of the EXIT procedure in managing neonatal airway emergencies, particularly in preterm births.

37. Supreeth RN, Hingmire S, Joshi A. (September 2024)
5-Fluorouracil-Induced Leukoencephalopathy: Report of Two Cases and Review of Literature.
Indian Journal of Medical and Paediatric Oncology.

Abstract

5-fluorouracil (5FU) forms an important component of chemotherapy regimens used in various gastrointestinal (GI) adenocarcinomas and head and neck squamous cell carcinomas. Leukoencephalopathy is a rare adverse effect of 5FU, mediated by hyperammonemia and hyperlactatemia. We report cases of two patients with GI adenocarcinomas who developed neurological symptoms while on 5FU infusion. The neuroimaging and biochemical parameters were suggestive of toxic leukoencephalopathy. They were managed with cessation of the drug and short-term antiepileptic therapy. We also discuss the pathophysiology of this adverse effect and its management.

38. Bagare PC, Borle A, Baluni P, **Ekbote GG**, Sangale S. (September 2024)
Clinical Profile and Outcomes of Patients with Systemic Lupus Erythematosus.
Cureus. 16(9): e68541. DOI: https://doi.org/10.7759/cureus.68541

Abstract

Background: Systemic lupus erythematosus (SLE) is a complex autoimmune disorder characterized by relapsing-remitting immune system activation, affecting multiple organ systems. Despite significant advances in understanding SLE's pathogenesis, there remains a need for comprehensive clinical profiling at the time of diagnosis to improve early detection and management. This study addresses this gap by providing a detailed analysis of the

clinical presentation, disease activity, and patient outcomes using the Systemic Lupus International Collaborating Clinics (SLICC) criteria and Systemic Lupus Erythematosus Disease Activity Index (SLEDAI) index.

Methodology: This cross-sectional observational study included 80 patients diagnosed with SLE using the 2012 SLICC criteria. Patients were recruited from the Rheumatology department and other wards of Byramjee Jeejeebhoy Government Medical College and Sassoon General Hospital, Pune, India. All participants provided informed consent and institutional ethical approval was obtained. Data were collected through detailed clinical history, physical examinations, and standard tests such as chest X-rays, CBC, RFT, LFT, urine microscopy, creatine phosphokinase, ANA, AntiDsDNA, complement consumption, and Coombs' tests, with 2D echocardiography performed as needed. Follow-ups every three months over 1.5 years assessed disease activity using SLEDAI criteria. Patients aged 12 and above who met the SLICC criteria were included and those with other connective tissue disorders were excluded. Associations between clinical symptoms and organ involvement were analyzed using the chi-square test with a p-value of <0.05 considered significant.

Results: The study evaluated 80 patients with SLE, revealing a predominantly female cohort (80%) with a mean age of 29.4 years and a standard deviation of 8.3 years, skewed towards younger age groups. Clinical manifestations were diverse; the most common symptoms were (83.75%), oral ulcers (98.75%), and alopecia (95%). Anemia (66.25%) was the most prevalent abnormality, followed by albuminuria and renal abnormalities. Organ involvement was highest in the renal system (50%) and mucocutaneous features, with lower incidences in cardiac, gastrointestinal, and vascular systems. Gender-specific analyses indicated significant differences in SLE nephritis ($p=0.048$) and autoimmune hemolytic anemia ($p=0.046$). Autoantibody profiles showed high positivity for ANA (98.8%) and DsDNA (61.3%). Clinical outcomes demonstrated that 68.8% of patients achieved remission and 16.3% experienced organ damage. The SLEDAI scores significantly improved over time, with substantial reductions from baseline to nine months ($p<0.001$).

Conclusion: In conclusion, this study provides a detailed examination of SLE, revealing that it predominantly affects young adults and is characterized by diverse manifestations including mucocutaneous symptoms, significant renal involvement, and notable autoantibody profiles. The high prevalence of anti-nucleosome and anti-dsDNA antibodies underscores their diagnostic and prognostic value. Clinically, the findings highlight the necessity for early detection and targeted management of SLE, particularly in addressing renal and mucocutaneous symptoms. Future research should focus on longitudinal studies to track disease progression, explore genetic and environmental influences, and investigate regional variations to enhance treatment strategies and patient outcomes.

39. Sharma C, Joshi DS, Jathar K, Joshi S. (September-December 2024)
An unusual case of endophthalmitis.
Journal of Clinical Ophthalmology and Research. 12(3):320-2. *DOI:* 10.4103/jcor.jcor_42_24

Abstract

Postoperative endophthalmitis is an uncommon yet devastating complication after cataract surgery. We report a case of acute-onset postoperative endophthalmitis secondary to a rare causative pathogen Chryseobacterium. Elderly male patient with chronic kidney disease on

hemodialysis with acute-onset postoperative endophthalmitis was managed with systemic and local higher antibiotics, leading to the resolution of the infection.

40. Kelkar R, Barve NA, Kelkar R, Kharel S, **Khanapurkar S**, Yadav R. (September 2024) *Comparison of glucagon-like peptide-1 receptor agonists vs. placebo on any cardiovascular events in overweight or obese non-diabetic patients: a systematic review and meta-analysis.* Frontiers in Cardiovascular Medicine. 11:1453297. https://doi.org/10.3389/fcvm.2024.1453297

Abstract

Introduction: Glucagon-like peptide 1 receptor agonists (GLP-1 RA) have been extensively used to treat obesity in recent years. These novel drugs are effective at reducing body weight and also the risk of major adverse cardiovascular events in individuals with type 2 diabetes. However, the data of its efficacy in reducing cardiovascular events in individuals without type 2 diabetes is not as robust. We aim to update and conduct a systematic review and meta-analysis to assess the same.

Methods: The study was conducted according to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) guideline. Researchers searched PubMed, EMBASE, and Clinicaltrials.gov for English literature from inception to 2024. Randomized Controlled trials enrolling adult participants (age ≥ 18 years) who are overweight or obese (BMI > 25 Kg/m2) with a comparison of all cardiovascular events between patients taking GLP1-RA and placebo were included. The analysis was done by Revman version 5.4.

Results: A total of 17 RCTs among 34,419 participants were included in the analysis. The pooled risk ratio from 17 studies illustrated that patients with GLP-1 RA had a significantly lower risk of cardiovascular events compared to patients who had a placebo (RR = 0.75; 95% confidence interval 0.64–0.89, p-value = 0.0008). Semaglutide was found to have a statistically significant greatest risk reduction than other drug types.

Conclusions: This meta-analysis found that GLP-1 RA significantly reduced all types of cardiovascular events in overweight and obese patients without diabetes. Semaglutide was found to be superior to others in CV event reductions. But still, the results of ongoing trials are needed.

41. **Walimbe PB**, Gogate PM, Walimbe TP, Khaladkar GM. (September 2024) *Longitudinal follow-up and outcome analysis in patching resistant/patching noncompliant amblyopic subjects treated with dichoptic amblyopia training.* Journal of Clinical Ophthalmology and Research. 12(3):209-12. *DOI:* 10.4103/jcor.jcor_75_24

Abstract

Purpose: The purpose of the study was to estimate the efficacy of dichoptic amblyopia training (DAT) in patching resistant/patching noncompliant amblyopic subjects on best-corrected distance visual acuity and stereoacuity with 12-month follow-up.

Methodology: In this study, 113 participants with anisometropic, isometropic, strabismic, and accommodative esotropia with amblyopia, with a mean age of 8 years (interquartile range [IQR] 7–10), using full-time spectacle correction and not improving with prescribed patching protocol in 2 subsequent visits 3 months apart were included in the study. Subjects with

deprivational amblyopia, ocular comorbidity, or neuronal defects were excluded. Subjects were given 30 min of dichoptic gameplay with Bynocs DAT for 5 days a week for at least 6 weeks. Best-corrected distance visual acuity and stereoacuity of subjects were recorded before treatment, immediately after Bynocs DAT, 6 months, and at 12-month follow-up.

Results: The age group of the participants was divided into three groups – (1) <9 years (64.6%), (2) 10–17 years (33.6%), and (3) >18 years (1.8%). The median (IQR) age of 113 participants was 8 years (7–10). The diagnosis of the participants was anisometropic amblyopia in 18 (15.9%), isometropic amblyopia in 72 (63.7%), accommodative esotropia with amblyopia in 18 (15.9%), and strabismic amblyopia in 5 (4.4%). Post dichoptic therapy, the best-corrected distance visual acuity improvement was statistically significant using the McNemar test and remained stable till the 12-month follow-up ($P < 0.001$). Post Bynocs DAT, stereoacuity improvement was statistically significant using the McNemar test and maintained till the 12-month follow-up ($P < 0.001$).

Conclusion: Best-corrected distance visual acuity and stereoacuity improved after Bynocs DAT and remained stable in patching resistant/patching noncompliant subjects with anisometropic and isometropic amblyopia 12 months after cessation of treatment.

42. Rizvi M, Khan M, Jardani AA, Ghoshal U, Jabri ZA, Ahanjan M, Mamari AA, Shizawi NA, Sami H, Balkhair A, Shaukat A, **Soman R**, et.al. (September 2024)
Antimicrobial Susceptibility of Uropathogenic Escherichia coli with Analysis of Impact of Socio-Economic Factors in Low, Medium and High-Income Countries.
Preprints. 2024. https://doi.org/10.20944/preprints202409.1855.v1

Abstract

Background: While mapping Escherichia coli susceptibility in community acquired simple UTIs across 38 centres, DASH to Protect Antibiotics, (https://dashuti.com/), a multiregional study also assessed impact of socioeconomic conditions and climate on antimicrobial susceptibility.

Methods: The centres were located in the Indian subcontinent, Middle East, North and West Africa, Eurasia, Europe, and North America. Harmonic means were used for comparative analysis of the antimicrobial susceptibility of E. coli in simple cystitis. Kruskal-Wallis test was utilized to compare susceptibility means between the antimicrobials and the GDP. A two-way ANOVA to simultaneously analyzed the impact of the antimicrobials and GDP on the proportion of susceptible E. coli while adjusting for variables (low and high temperature, humidity and population density per sqkm).

Findings: Antimicrobial susceptibility varied between regions and within large countries like India and Pakistan. Nitrofurantoin (89%) and fosfomycin (96%) emerged as the most effective antimicrobials. In majority of the centres, susceptibility to other oral antimicrobials was low: cotrimoxazole

43. Yewale R, Daphale A, Gandhi A, Bapaye A. (September-October 2024)
Prevention, detection and management of adverse events of third-space endoscopy.
Indian Journal of Gastroenterology. 43(5):872–885. https://doi.org/10.1007/s12664-024-01665-4

Abstract

Third space endoscopy (TSE) or sub-mucosal endoscopy using a mucosal fap valve (SEMF) enables the endoscopist to operate in the deeper layers of the gastrointestinal tract or gain access to the mediastinal/peritoneal cavity for natural orifce transoral endoscopic surgery (NOTES). TSE procedures are essentially endoscopic surgical procedures with a variable learning curve. Adverse events (AEs) during TSE are specifc and follow a certain pattern across the spectrum of TSE procedures. These can be broadly categorized according to either type of AE, time of presentation relative to the procedure or according to degree of severity. Three major categories of AEs encountered during TSE include insufation related AEs, mucosal injuries (MIs) and bleeding. Other relevant AEs include infectious complications, aspiration pneumonia, post-procedural chest/abdominal pain, atelectasis, cardiac arrhythmias, pleural efusion and pulmonary embolism. Reported incidence of AEs during TSE procedures varies according to the type and complexity of procedure. Acquaintance regarding potential risk factors, technical tips and precautions, alarm signs for early recognition, assessment of degree of severity, morphological characterization of AEs and fnally, expeditious selection of appropriate management strategy are crucial and imperative for successful clinical outcomes. The current review discusses the current evidence and practical guidelines for prevention, early detection and management of TSE-related AEs.

44. Todi S, Sathe P, V R, **Prayag P**, et al. (September 2024)
Real-World Evidence on Use of Ceftazidime-Avibactam in the Management of Gram-Negative Infections: A Retrospective Analysis.
Cureus. 16(9):e70234. doi:10.7759/cureus.70234

Abstract

There is limited real-world data from India examining the treatment characteristics, safety, and efficacy of ceftazidime-avibactam against Gram-negative organisms especially multidrug-resistant pathogens including carbapenem-resistant Enterobacterales and carbapenem-resistant Pseudomonas. In this retrospective study, the real-world treatment patterns, effectiveness, and safety of ceftazidime-avibactam in treating Gram-negative infections were assessed. Data was extracted from electronic health records of adult patients admitted to the hospital with documented Gram-negative infection who had received treatment for at least 48 hours with ceftazidime-avibactam as a part of routine clinical management. Among the 189 patients, on Day 3, clinical symptom improvement was recorded in 79.6% of patients who received ceftazidime-avibactam within 72 hours of hospital admission. Clinical success was achieved in 79.5% and 76.3% of assessed patients on Day 7 and Day 14/end-of-treatment (EOT), respectively. Microbiological success was reported in 76% of patients on Day 7 and in 60.3% of patients on Day 14 or EOT. The mean treatment duration of ceftazidime-avibactam therapy was 6.92 (± 4.1) days. No new safety concerns were identified. In conclusion, this study provides real-world evidence on treatment patterns and clinical outcomes associated with ceftazidime-avibactam in India, complementing the previously reported literature. The results suggest ceftazidime-avibactam is an effective and tolerable option for the management of multidrug-resistant (MDR) Gram-negative infections in critically ill patients.

45. **Deshmukh V**, Oka G. (September 2024)

How do adolescents perceive body image and respond to body dissatisfaction?.
International Journal of Adolescent Medicine and Health. 36(5): 483
489. https://doi.org/10.1515/ijamh-2024-0112

Abstract

Objectives: To assess adolescents' attitudes, satisfaction, and practices regarding their body image across body mass index (BMI) categories.

Methods: In this cross-sectional survey (2019–2020), we recorded anthropometry of 2,089 girls and boys between 13 and 17 years from semi-urban schools in western India. Multidimensional Body-Self Relations Questionnaire (MBSRQ) was used for multidimensional attitudinal assessment of body image and weight-related variables. The Stunkard scale was used to assess body shape perception.

Results: In higher age categories, boys were more satisfied with their appearance (p=0.012, p linearity=0.001), cared more about grooming (p=0.007, p linearity=0.001), and regarded themselves more physically fit (p=0.003, p linearity 0.030 up to 16 years). Boys with normal BMI were more satisfied with their appearance (p=0.001), fitness (p=0.024), and more alert about symptoms of illness (p<0.000) than others. With increasing BMI, older girls and boys were more preoccupied with their weight and perceived themselves to be heavier (p=0.001). A majority of underweight girls perceived their weight as normal. Students engaged in weight loss practices irrespective of their BMI category. Boys wanted a bigger, and girls a smaller body shape than their current shape. We found body shape dissatisfaction in 66.4 % adolescents, more in boys than in girls (p=0.001).

Conclusions: Body shape dissatisfaction is quite common among semiurban adolescents, with boys outnumbering girls. BMI, age, and sex are associated with weight perception and attitude toward body image. Unindicated weight loss practices are prevalent.

46. Retzky JS, Straus C, **Bhatia A**, Sneag DB, Nwawka OK, Lee SK. (September 2024)
Injury Patterns, Imaging Findings, and Prognosis for Muscle Strength Recovery in Surgical Infraclavicular Brachial Plexus Injuries.
J Hand Surg Glob Online. 6(6):888-893.

Abstract

Purpose: Historically, infraclavicular brachial plexus injuries (IBPIs) were considered neuropraxic injuries that would improve with nonsurgical intervention. However, more recent studies suggest that these injuries may benefit from surgical intervention. The aims of this retrospective study were to (1) describe injury patterns and associated injuries of isolated, traumatic IBPIs, (2) evaluate the concordance of preoperative ultrasound and magnetic resonance neurography with surgical findings of patients who underwent surgical intervention for IBPIs, and (3) describe outcomes of surgical intervention for these injuries.

Methods: A total of 148 patients who underwent surgical intervention for traumatic injury to the IBP by one of three hand/upper-extremity fellowship-trained surgeons from 1995 to 2021 were included. Patients with supraclavicular brachial plexus injuries, stretch injuries, nonsurgical IBPIs, and brachial plexus dysfunction without traumatic injury were excluded.

Results: The most common cause of injury was motor vehicle accident (74%). Scapular fractures were associated with IBPI in 22% of patients. Isolated branch injuries were the most common (58.8%), of which isolated musculocutaneous nerve injury was the most frequent (40.6%). Preoperative ultrasound and magnetic resonance neurography were concordant with

surgical findings in eight of nine and seven of nine patients, respectively. Nerve transfers were the most common intervention (46%). Muscle strength improved after surgery, with an increase from 1 to 5 points on the Medical Research Council scale at 14-50 months after surgery.

Conclusions: Infraclavicular brachial plexus injuries are associated with high-energy trauma and concomitant upper-extremity fractures. Ultrasound and magnetic resonance neurography are mostly concordant with surgical findings in patients undergoing surgical intervention for IBPIs. Prognosis for muscle recovery after surgery is good in patients with IBPIs.

Clinical relevance: Infraclavicular brachial plexus injuries can improve with surgical intervention.

47. Teli A, Iyer R, Shanbhag K, Gawarguru R, Gayan S, Shaikh S, **Tamhankar A**, Kamat SS, Dey T. (September 2024)

Breast cancer spheroids prefer activated macrophages as an accomplice: An in-vitro study.
bioRxiv. Pre-print DOI: https://doi.org/10.1101/2024.09.24.614655

Abstract

Cancer, a heterogeneous disease in nature, often requires help from diverse pro-tumor or tumor-associated- cells, which are recruited and persevered within the stroma. Pro-tumor stromal cells provide the essential support needed for tumor growth, metastasis, and development of drug resistance in due time. Tumor-associated macrophages, one of such cells, are essential to tumor microenvironment and tumor survival. In recent years, TAMs have been identified as potential drug targets and therapeutic agents, which encourages the in-depth characterization of their crosstalk with the tumors. The current study has successfully developed a cost-effective in vitro platform for Chemokine Assisted Recruitment of Macrophages to spheroids mimicking the physiology of TAM recruitment. Firstly, monocytic cell line (U937) were converted into activated naive macrophages (M0) and pro- and anti-inflammatory (M1 and M2) subtypes. Monocytes, M0, M1, and M2 macrophages are characterized extensively. Secondly, the naive and polarized macrophages were subjected to chemokine-dependent recruitment into monotypic and heterotypic breast cancer spheroids. The nature of the recruitment is further investigated by assessing the profile of chemokines and chemokine receptors. Recruited macrophages are also observed to manipulate spheroid behavior in many ways. The recruited macrophages also exhibit an increased level of Siglec-1 (CD169), one of the potential TAM markers. The current platform's potential for application can be extended to understand the recruitment process of other immune/stromal cells to solid tumors. It could be a potential addition to the arrays of in vitro platforms developed to screen the efficiency of cell-based immunotherapeutics in the future.

48. Patil M, Kulkarni M, **Sinha A**, Ghorpade R. (September 2024).

Studies on Biomechanics of Human Ankle Joint, Joint Forces Foot Pressure Assessment during Gait.
Trends in Biomaterials and Artificial Organs. 38(3):153-8.

Abstract

Human Gait is the result of a cyclic series of walking motions involving mechanical links consisting of long bones and muscle tissue associated with the lower body. From one step up

to the second step, there are phases of Gait, such as stance phases and swing. The stance phase consists of heel strike, flat foot, midstance, and push-off. This is an Interventional study of asymptomatic volunteers for the development of a foot link model of the bipedal static standing position and gait stance phases. Anthropometric data gives the geometry of the Achilles tendon, the Anterior Tibialis Tendon, for equilibrium calculation. From this, the Ankle Joint Force is collected for the development of a free-body diagram of the foot segment model. The Gait motion is captured in the sagittal plane by videography measurement technique. The fundamental equilibrium equations are used for determining the unknown forces acting on joint-free bodies. The foot pressure values are obtained by the foot pressure pad. Among the all-stance phases, maximum Ankle joint force is observed at Push off phase. In comparison to the static standing position, the maximum Achilles tendon force in gait stance phases is observed to be 5.3 times body weight. High tensile forces are developed in the Achilles tendon during the push-off phases. This investigation of Ankle joint forces and foot pressure correlation is useful in identifying and analysing the flat foot, and high arch conditions in patients. These conditions can be found out with minimal instrumentation within no time. It can be valuable input for further diagnosis of Gait-related conditions and foot alignments.

49. Narawade S, Mahalle N, Bhavar S, Waghule S, Bobade S, Naik S. (August 2024).
Birth Prevalence of Endocrine-Metabolic Disorders Detected by Newborn Screening Test in Pune (India) Population.
Indian Journal of Clinical Biochemistry. 1-10.

Abstract

Although most of the babies are born healthy and appear normal, a few babies exhibit abnormal medical conditions. Newborn screening for inborn errors of metabolism is an established panel of tests that assist in the timely recognition of treatable disorders. 8007 Neonates born in a well-known hospital from August 2019 to August 2021 were screened for the following five tests: Thyroid stimulating Hormone, 17-hydroxy progesterone (17-OHP), Total Galactose(GAL), Glucose 6 Phosphate Dehydrogenase (G6PD) and Biotinidase (BTD). Dried blood spots (DBS) were processed for the above tests using Enzyme-linked immunosorbent assay (ELISA), colorimetric, and dissociation-enhanced lanthenide-fluroscent immunoassay (DELFIA) techniques. DBS with abnormal results were retested for confirmation. Affected infants were recalled for venous blood collection for confirmation. We found 4 newborns with Hypothyroidism (CH 1: 2002), 4 with congenital adrenal hyperplasia (CAH 1:2002), 9 with G6PD deficiency (1:900), one with galactose-phosphate-uridyl transferase deficiency (1: 8000) and one with biotinidase deficiencyduring the study period. Parents of G6PD deficient babies were counseled. Congenital Hypothyroidism (CH) and Congenital Adrenal Hyperplasiababies were treated and followed up to find the response. The outcome of the screening result shall prevent the family and society in turn from facing severe and unbearable consequences.

50. **Khaladkar SM**, Krishnani KS, Mohanan K, Jhala NA. (August 2024).
Double retro-aortic left renal vein—a rare anatomical variant.
BMJ Case Reports. 17(8):e261316. DOI:10.1136/bcr-2024-261316

Abstract

No abstract available.

51. Kelkar R, Phadke U, Kelkar R, **Khanapurkar S**, Barve NA. (August 2024).
Significance of Correlation of Shear Wave Elastography With Fibrosis-4 in a Cohort of Patients With Diabetes and Nonalcoholic Fatty Liver Disease.
Cureus. 16(8):e67015. doi: 10.7759/cureus.67015. PMID: 39280483; PMCID: PMC11402460.

Abstract

Background: Nonalcoholic fatty liver disease (NAFLD) is increasingly recognized as a cause of chronic liver disease. It can lead to complications such as decompensated liver cirrhosis and hepatocellular carcinoma.

Objectives: This study aimed to assess liver stiffness using point shear wave elastography in patients with diabetes and NAFLD and to compare the results with the FIB-4 (fibrosis-4) score, AST/ALT (aspartate aminotransferase-to-alanine aminotransferase) ratio, and APRI (AST-to-Platelet Ratio Index).

Materials and methods: A cross-sectional study was conducted on type 2 diabetes patients who underwent point shear wave liver elastography for liver stiffness estimation between January 2020 and February 2023. Demographic data such as age, sex, and laboratory data (AST, ALT, and platelet count) were recorded. FIB-4 score, APRI, and AST/ALT ratio were calculated for these patients. The results of the FIB-4 score and APRI were then compared with the shear wave liver elastography fibrosis scores.

Results: The analysis included 60 patients, of whom 50 (83.33%) were male, with a mean age of 44.8 years (SD: 11.02; range: 21-69). Thirty-six patients (60%) had significant fibrosis. There was a significant positive correlation between the shear wave elastography results and the FIB-4 and APRI scores.

Conclusion: The findings revealed that nearly two-thirds of the study group had significant fibrosis (≥F2), highlighting the need for early NAFLD diagnosis and treatment. Noninvasive laboratory serum markers, in conjunction with shear wave liver elastography, are useful for diagnosing severe fibrosis.

52. **Javadekar N**, Javadekar A, Thakur D. (August 2024).
Health technology assessment in mental health services.
Industrial Psychiatry Journal. 33 (Suppl 1): S246-9. *DOI:* 10.4103/ipj.ipj_155_24

Abstract

Mental illnesses have a significant impact on the lives of people not only because of their morbidity but also because of their noticeable impact on economic wellbeing. Out-of-pocket expenditure for mental healthcare services is significant in India and may even lead to impoverishment of the families. The present paper states that Health Technology Assessment (HTA) is necessary for mental healthcare primarily because of its rising cost and competing interests in government decisions and prioritization. HTA does a systematic evaluation of the consequences of using health technology. HTA will provide information to decision makers to develop and implement safer, cost-effective, and efficient policies at the individual and government levels. Appropriate guidance regarding the cost-effectiveness of mental health

interventions will help to serve the purpose of providing transparent reports in the context of limited budgets.

53. Bhingradia YM, Yadav C, **Salunke TS**. (August 2024).
Elliptical excision and primary closure of nasal defect to achieve best esthetic outcome: A case series of 50 patients.
Journal of Cutaneous and Aesthetic Surgery. 17(3):234-238. doi: 10.25259/jcas_120_23

Abstract

Objectives: To evaluate the cosmetic result of nasal of an elliptical excision and primary closure on small nasal defect by using Scar assessment using the Stony Brook Scar Evaluation Scale (SBSES) score.

Material and Methods: This retrospective interventional study was conducted in a private clinic over a 2-year duration. Patients aged 18–60 years with nasal defects <1.5 cm were enrolled after obtaining informed consent. Exclusion criteria included immunocompromised status, keloidal tendency, local site infection, bleeding disorder, age <18 years, and lack of consent. Scar assessment using the SBSES was performed at the end of 6 months. Statistical analysis included summary statistics, analysis of variance tests, and a significance level of $P < 0.05$.

Results: The study included 50 patients, with 54% males and 46% females. The most common age group was 21–40 years, and melanocytic nevi was the most common cause for excision. Lesions were excised mainly from the lateral wall and dorsum of the nose. The mean SBSES score was 3.79 ± 0.467. The best cosmetic outcome was observed in lesions involving the dorsum followed by the root of the nose. No significant difference was found among the SBSES scores for various subunits.

Conclusion: Elliptical excision with primary closure is a simple and effective technique for small nasal defects, providing good cosmetic results. The location of the nasal defect influences the cosmetic outcome, with better results observed in areas with thinner skin and increased skin laxity.

54. Sheth J, Nair A, Sheth F, Ajagekar M, Dhondekar T, **Godbole K**, et al. (August 2024).
Burden of rare genetic disorders in India: twenty-two years' experience of a tertiary centre.
Orphanet J Rare Dis. 19(1):295. doi: 10.1186/s13023-024-03300-z.

Abstract

Background: Rare disorders comprise of ~ 7500 different conditions affecting multiple systems. Diagnosis of rare diseases is complex due to dearth of specialized medical professionals, testing labs and limited therapeutic options. There is scarcity of data on the prevalence of rare diseases in different populations. India being home to a large population comprising of 4600 population groups, of which several thousand are endogamous, is likely to have a high burden of rare diseases. The present study provides a retrospective overview of a cohort of patients with rare genetic diseases identified at a tertiary genetic test centre in India.

Results: Overall, 3294 patients with 305 rare diseases were identified in the present study cohort. These were categorized into 14 disease groups based on the major organ/ organ system affected. Highest number of rare diseases (D = 149/305, 48.9%) were identified in the neuromuscular and neurodevelopmental (NMND) group followed by inborn errors of

metabolism (IEM) (D = 47/305; 15.4%). Majority patients in the present cohort (N = 1992, 61%) were diagnosed under IEM group, of which Gaucher disease constituted maximum cases (N = 224, 11.2%). Under the NMND group, Duchenne muscular dystrophy (N = 291/885, 32.9%), trinucleotide repeat expansion disorders (N = 242/885; 27.3%) and spinal muscular atrophy (N = 141/885, 15.9%) were the most common. Majority cases of β-thalassemia (N = 120/149, 80.5%) and cystic fibrosis (N = 74/75, 98.7%) under the haematological and pulmonary groups were observed, respectively. Founder variants were identified for Tay-Sachs disease and mucopolysaccharidosis IVA diseases. Recurrent variants for Gaucher disease (GBA:c.1448T > C), β-thalassemia (HBB:c.92.+5G > C), non-syndromic hearing loss (GJB2:c.71G > A), albinism (TYR:c.832 C > T), congenital adrenal hyperplasia (CYP21A2:c.29-13 C > G) and progressive pseudo rheumatoid dysplasia (CCN6:c.298T > A) were observed in the present study.

Conclusion: The present retrospective study of rare disease patients diagnosed at a tertiary genetic test centre provides first insight into the distribution of rare genetic diseases across the country. This information will likely aid in drafting future health policies, including newborn screening programs, development of target specific panel for affordable diagnosis of rare diseases and eventually build a platform for devising novel treatment strategies for rare diseases.

55. Khilnani GC, Tiwari P, Mittal S, Kulkarni AP, Chaudhry D, Zirpe KG, Todi SK, Mohan A, Hegde A, Jagiasi BG, Krishna B, Rodrigues C, Govil D, Pal D, Divatia JV, Sengar M, Gupta M, Desai M, Rungta N, **Prayag PS**, et al. (August 2024).
Guidelines for Antibiotics Prescription in Critically Ill Patients.
Indian J Crit Care Med. 28(Suppl 2):S104-S216. doi: 10.5005/jp-journals-10071-24677
Abstract
No abstract available.

56. Rosenthal VD, Yin R, Jin Z, Perez V, Kis MA, Abdulaziz-Alkhawaja S, Valderrama-Beltran SL, Gomez K, Rodas CMH, El-Sisi A, Sahu S, Kharbanda M, Rodrigues C, Myatra SN, Chawla R, Sandhu K, Mehta Y, **Rajhans P**, at al. (August 2024).
Examining the impact of a 9-component bundle and the INICC multidimensional approach on catheter-associated urinary tract infection rates in 32 countries across Asia, Eastern Europe, Latin America, and the Middle East.
Am J Infect Control. 52(8):906-914. doi: 10.1016/j.ajic.2024.02.017. Epub 2024 Mar 2. PMID: 38437883.
Abstract
Background: Catheter-Associated Urinary Tract Infections (CAUTIs) frequently occur in the intensive care unit (ICU) and are correlated with a significant burden.
Methods: We implemented a strategy involving a 9-element bundle, education, surveillance of CAUTI rates and clinical outcomes, monitoring compliance with bundle components, feedback of CAUTI rates and performance feedback. This was executed in 299 ICUs across 32 low- and middle-income countries. The dependent variable was CAUTI per 1,000 UC days, assessed at baseline and throughout the intervention, in the second month, third month,

4 to 15 months, 16 to 27 months, and 28 to 39 months. Comparisons were made using a 2-sample t test, and the exposure-outcome relationship was explored using a generalized linear mixed model with a Poisson distribution.

Results: Over the course of 978,364 patient days, 150,258 patients utilized 652,053 UC-days. The rates of CAUTI per 1,000 UC days were measured. The rates decreased from 14.89 during the baseline period to 5.51 in the second month (risk ratio [RR] = 0.37; 95% confidence interval [CI] = 0.34-0.39; P < .001), 3.79 in the third month (RR = 0.25; 95% CI = 0.23-0.28; P < .001), 2.98 in the 4 to 15 months (RR = 0.21; 95% CI = 0.18-0.22; P < .001), 1.86 in the 16 to 27 months (RR = 0.12; 95% CI = 0.11-0.14; P < .001), and 1.71 in the 28 to 39 months (RR = 0.11; 95% CI = 0.09-0.13; P < .001).

Conclusions: Our intervention, without substantial costs or additional staffing, achieved an 89% reduction in CAUTI incidence in ICUs across 32 countries, demonstrating feasibility in ICUs of low- and middle-income countries.

57. Pardiwala DN, Tapasvi S, Chaudhary D, **Babhulkar A**, Varghese J, Rajan D, Narvekar A, Sancheti P. (August 2024).

Outcomes following gel-based autologous chondrocyte implantation for articular cartilage defects of the knee.

Knee. 49:70-78

Abstract

Background: Gel-based autologous chondrocyte implantation (GACI) enables a simpler and more effective delivery of chondrocytes with reproducible three-dimensional structural restoration of the articular cartilage surface. There is limited documentation of medium-term outcomes. This study assessed safety and effectiveness of GACI for treatment of cartilage defects of the knee.

Methods: This multicentric retrospective study was conducted across eight hospitals in India. Patients who had undergone GACI (CARTIGROW®) between 2008 and 2014 for the treatment of focal articular cartilage defects of the knee (mean defect size 4.5 ± 5.8 cm2) in limbs with normal alignment were analyzed. Primary outcomes were changes in Lysholm Knee Scoring Scale score, and Knee Outcome Sports Activity Scale (SAS).

Results: A total of 107 patients (110 knee joints) with mean age 31.0 ± 10.5 years were included. The mean follow-up was 9.8 ± 1.5 years (range 7.85-13.43). Majority had osteochondritis dissecans (n = 51; 46.4%). The mean Lysholm Knee Scoring Scale score (81.23 ± 13.21 vs. 51.32 ± 17.89; p < 0.0001) and SAS score (80.93 ± 8.26 vs. 28.11 ± 12.28; p < 0.0001) improved significantly at follow-up as compared to pre-operative. Magnetic Resonance Observation of Cartilage Repair Tissue score in 39 patients at minimum 2 years follow-up was 84.5 ± 4.3. Among 30 patients who were playing sports before treatment, 17 patients (56.7%) could return to the same or higher level of sports post-transplantation. No major intra-operative or post-operative complications were noted. Four patients warranted revision surgery.

Conclusion: GACI is an effective treatment option for large focal articular cartilage defects of the knee with a low complication rate and revision rate and significant improvement in functional scores.

58. Nehete R, **Bhatia A**. (August 2024).

Variation in the Distribution of the Middle Trunk: Potential Contraindication for C7 Harvest?.

Indian Journal of Plastic Surgery. 57(S 01):S133. DOI: 10.1055/s-0044-1788897

Abstract

No abstract available.

59. **Desai VS**, Vijayan D, Rathinaswamy R. (July-December 2024).

Impact of Two-day Courses on "Swallowing and Voice" in Improving the Knowledge of Speech Language Pathologists: Pre-post Comparison.

JSS Journal of Interdisciplinary Research. 1(2):40-49.

Abstract

Introduction: Conferences, short-term training programs, and continuing rehabilitation education programs are periodically organized to update the recent advancements in the field. However, there is a lack of empirical evidence to show the effectiveness of such programs in the Indian context. The aim of the study is to assess the effectiveness of 2-day courses on "Swallowing" and "Voice" by comparing the pre- and post-scores.

Methods: Two-day courses on "Swallowing" and "Voice" were conducted for Speech language pathologists (SLPs). For the Day 1 course on swallowing, 30 SLPs and for the Day 2 course on voice, 22 SLPs participated in the study. A 15-item questionnaire was prepared and administered separately for "Swallowing" and "Voice" before the course started and at the end of the course on their respective days. The answers in the questionnaires were analyzed separately for both the pretest and post-test for the Swallowing and Voice course. The total scores for each participant were added, averaged, and compared between the pretest and post-test separately for both courses.

Results: Paired sample t-test revealed that the increase in scores from the pretest to the post-test is statistically significant at 0.05 level for both "swallowing" ($t = -2.447$; $P = 0.02$) and "voice" courses ($t = -2.259$; $P = 0.03$). The percentage of scores that improved in the post-test from the pretest was 11.73% for the swallowing course and 13.34% for the voice course.

Conclusions: The results of the present study show that the 2-day course on "Swallowing" and "Voice" was effective in augmenting the knowledge of participants in the area of swallowing-related and voice-related disorders.

60. Prayag PS, Patwardhan SA, Joshi RS, Dhupad S, Rane T, Prayag AP. (July 2024).

Comparative efficacies of the three echinocandins for Candida auris candidemia: real world evidence from a tertiary centre in India.

Medical Mycology. 62(7): myae065. DOI: https://doi.org/10.1093/mmy/myae065

Abstract

Though echinocandins are the first line of therapy for *C. auris* candidemia, there is little clinical data to guide the choice of therapy within this class. This was the first study to compare the three echinocandins in terms of efficacy and outcomes for *C. auris* candidemia. This was a retrospective analysis of 82 episodes of candidemia caused by *C. auris* comparing outcomes across the three echinocandins. Majority patients in our study were treated with micafungin. Susceptibility rates were the lowest for caspofungin (35.36% resistance), with no resistance reported for the other two echinocandins. When a susceptible echinocandin was

chosen, caspofungin resistance was not a factor significantly associated with mortality. Also, when a susceptible echinocandin was used for therapy, the choice within the class did not affect clinical cure, microbiological cure, or mortality ($P > 0.05$ for all). Failure to achieve microbiological cure ($P = 0.018$) and receipt of immune-modulatory therapy ($P = 0.01$) were significantly associated with increased mortality. Significant cost variation was noted among the echinocandins. Considering the significant cost variation, comparable efficacies can be reassuring for the prescribing physician.

61. Wadhokar P, Deshmukh P, Deogaonkar A, Bhat S, Phadke G, **Deshmukh V**, Phadke L. (July 2024).
Prediction of Micro-and Macrovascular Complications in Type 2 Diabetes Mellitus using Heart Rate Variability.
The Journal of the Association of Physicians of India. 72(7):59-63.

Abstract

Objective: To explore the utility of heart rate variability (HRV), a noninvasive marker of cardiac autonomic activity, as a prescreening tool for the prediction of micro- and macrovascular complications in type 2 diabetes mellitus (T2DM).

Methods: Consenting type 2 diabetic patients of both genders between 30 and 70 years, without known micro- and macrovascular complications of diabetes, were enrolled. Patients with medications affecting the HRV were excluded. Prior to other screening tests, 15 minutes of resting electrocardiogram (ECG) (1 kHz) was recorded in enrolled patients, followed by an exercise stress test and assessment for nephropathy, retinopathy, and peripheral neuropathy. The patients with positive stress tests were referred for coronary angiography to confirm coronary artery disease. Based on screening test results, patients were grouped as Group I—T2DM without complications (n = 31) and Group II—T2DM with micro/macrovascular complications (n = 29), (total = 60).

Results: Group comparison and test for association were employed, and p-value of <0.05 was considered significant. Significantly reduced HRV (decreased standard deviation of NN interval) between groups and a strong association of HRV indices with complications of diabetes were observed. Logistic regression to classify complicated vs noncomplicated group was used, and an accuracy of 0.78 with 85% sensitivity, 74% specificity with area under the curve (AUC) of 0.83 was observed.

Conclusion: Significantly reduced HRV, stronger association with complications, and 85% sensitivity, 74% specificity, and 78% accuracy of classification make HRV indices a promising prescreening tool to predict micro- and macrovascular complications in type 2 diabetes.

62. Bajpai J, **Gandhi SS**, Rajappa S, Pathak R, Joshi S, Batra A, Singh M, Ghosh J, Rangarajan B, Prakash G, Dubashi B. (July 2024).
Indian Society of Medical and Paediatric Oncology (ISMPO)—Breast Cancer in Young Guidelines.
Indian Journal of Medical and Paediatric Oncology. DOI https://doi.org/ 10.1055/s-0044-1785219.

Abstract

Breast cancer (BC) is the most common type of cancer globally and in India. In India, BC is more common among younger women compared with Western counterparts. Younger women with BC tend to have a less favorable outcome as they are more likely to have aggressive tumors. Younger women are not well represented in BC management studies as the median age at diagnosis is in the late 50s to early 60s. This can lead to difficulty in using risk-stratification models and molecular tools among young BC patients and may result in overtreatment. Therefore, Indian Society of Medical and Pediatric Oncology gathers and organizes available evidence from published literature to create a guide specifically for young BC patients in low- and middle-income countries like India.

63. Gupta P, Patil SS, Pillay U. (July-August 2024).
Takotsubo cardiomyopathy in a 7-month-old infant with familial hemophagocytic lymphohistiocytosis: A case report.
Journal of Pediatric Critical Care. 11(4):185-7. *DOI:* 10.4103/jpcc.jpcc_35_24
Abstract
Takotsubo cardiomyopathy constitutes an acute cardiac condition that mimics acute myocardial infarction in the absence of coronary artery disease. We present a case of a 7-month-old girl, who was admitted in the pediatric intensive care unit (PICU) at a tertiary care hospital for clinical deterioration with underlying familial hemophagocytic lymphohistiocytosis. During the PICU stay, on echocardiography, the patient had severe cardiac contractility compromise with a characteristic pattern of regional wall motion abnormalities of the left ventricle. This, in combination with elevated cardiac enzymes, led to the diagnosis of takotsubo cardiomyopathy.

64. **Prayag PS**, Chandrasekar P. (July-September 2024).
Infections in Hematopoietic Stem Cell Transplant Recipients in India–Think Global, Act Local.
Journal of Clinical Infectious Diseases Society. 2(3):121-130. *DOI:* 10.4103/CIDS.CIDS_48_24
Abstract
No abstract available.

65. Patwardhan SA, Prayag PS, Soman RN, Purandare BD, Ramya S, Dawra R, Joshi R, Prayag AP. (July-August 2024).
Candida auris - Comparison of sensititre YeastOne and Vitek 2 AST systems for antifungal susceptibility testing - A single centre experience.
Indian J Med Microbiol. 50:100618. doi: 10.1016/j.ijmmb.2024.100618. Epub 2024 May 30. PMID: 38795936.
Abstract
Introduction: Candida auris is emerging as an important cause of candidemia and deep seated candidal infection. We compared the susceptibility results of bloodstream Candida auris isolates by Vitek 2 with Sensititre YeastOne (SYO) method.

Methods: Forty-seven C. auris blood stream isolates were simultaneously tested for AFST by Vitek 2 and SYO.

Results: All strains were resistant to Fluconazole. 25.5% isolates showed pan-azole resistance. In comparison with SYO, lower MICs for voriconazole were noted with Vitek 2 (VME rate 76.1%). All strains were sensitive to anidulafungin and micafungin by SYO. For micafungin, Vitek 2 demonstrated higher MICs and an ME rate of 23.5%. Susceptibility interpretation of caspofungin by SYO was challenged by development of 'Eagle effect' resulting in sensitivity of 28.2%. We studied the evolution of caspofungin 'Eagle effect' with SYO by serial hourly MIC readings and noted that paradoxical growth commenced at 21 hrs of incubation. Compared to SYO, Vitek 2 showed higher resistance rate to Amphotericin B with ME rate of 25.6%.

Conclusion: Laboratories using commercial AFST systems for Candida auris need to be aware of the possibility of ME and VME for amphotericin B and voriconazole respectively with Vitek 2 and 'Eagle effect' for caspofungin with SYO.

66. Pathak N, Anu RI, **Kulkarni P**, Patel A. (July 2024).
A Survey on Unmet Need for Uniform Next-Generation Sequencing Reporting in India.
Indian Journal of Medical and Paediatric Oncology. 45(02):142-6.

Abstract

Introduction: Next-generation sequencing (NGS) has paved the way for precision oncology in oncology clinics today. With rapidly advancing therapeutics, it is becoming increasingly important to obtain information about the molecular milieu of a patient's tumor. However, reporting and interpreting of NGS is fraught with complexity and variability. To understand the questions surrounding NGS reporting in India, we conducted a survey.

Objectives: The aim of this study was to assess the gaps in NGS reporting and interpretation in Indian medical oncology clinics.

Materials and Methods: An anonymized 10-question survey-based study among Indian medical oncologists through Google forms was conducted between October 4 and 8, 2022.

Results: The sample size was n = 58. Seventy-one percent felt there was heterogeneity in NGS reporting, 72% were unaware of NGS reporting guidelines, and 62% did not feel the need for a molecular scientist assist in NGS interpretation. Almost all (98%) felt there was a need for uniform NGS reporting as well as an Indian NGS repository and data-sharing system (93%).

Conclusion: Our survey highlights the need for a uniform national guideline concerning NGS reporting.

67. Patil M, Kulkarni MS, **Sinha A**, Ghorpade RR. (June 2024).
Biomechanical Variations in Patients with Flatfoot deformity: Impact of Gender, Age, and BMI on Foot Kinetics and Kinematics.
Journal of Orthopaedics. 57:90-97. https://doi.org/10.1016/j.jor.2024.06.018

Abstract

Background: Flatfoot is considered by the collapse of the foot arch, altered biomechanics and impacting functional abilities. The biomechanical gait alteration of foot kinematics and kinetics in individuals with flatfoot, based on gender, age and Body mass index (BMI) in each cohort is unclear. This study explores how gender, age, and body mass

index (BMI) impact distinct foot biomechanical characteristics, including ankle joint angle (Jc°), Ground force reaction angle (GFR°), Achilles tendon force (T), Ankle joint force (Jc) and vertical ground reaction force (VGRF) during the gait stance phase, in flatfoot versus normal-foot individuals on Indian Population.

Method: A foot pressure test and sagittal plane motion analysis were performed on 142 individuals with normal-foot arches and 102 with flatfoot, stratified by gender, age, and BMI. Calculations of the magnitude and direction of forces in ankle joint equilibrants relied on inverse dynamic analysis, vertical ground force reaction and mapping motion data of the gait stance phases.

Result: In the midstance phase, females with high BMI (HBMI) in the middle and older age group ($p = 0.029$ and $p = 0.014$), and males with HBMI in the older age group ($p = 0.039$) demonstrate significantly higher VGRF. Females and males with HBMI in middle and older age groups, along with males with normal BMI in the older age cohort, show positive and negative ranges of GFR°, indicating gait instability. In the push-off phase, females with HBMI in a middle-aged group exhibit significantly lower T and Jc ($p = 0.023$ and $p = 0.026$) respectively.

Conclusion: The biomechanical issues in individuals with flatfoot, while accounting for the influence of gender, age and BMI, are crucial for tailored interventions and precise solutions to biomechanical issues, thereby enhancing foot function and reducing discomfort.

68. DeWitt JM, Othman MO, **Bapaye A**. (June 2024).
Do's and don'ts in esophageal peroral endoscopic myotomy: troubleshooting, managing adverse events, and tips for success.
Gastrointest Endosc. 99(6):886-894. doi: 10.1016/j.gie.2024.02.029. Epub 2024 Mar 4. PMID: 38447664.

Abstract

No Abstract Available

69. Ravat S, Rohatgi A, **Kulkarni R**, Jabeen SA, Patil B, Dash A, Malhotra M. (June 2024).
Efficacy and Safety of adjunctive Perampanel in a prospective, real-world, Phase IV study in Indian patients aged ≥12 years for Treatment of focal-onset Epilepsy: Study 508.
Epilepsia Open. 9(3):940-950. doi: 10.1002/epi4.12885. Epub 2024 Mar 16. PMID: 38124551; PMCID: PMC11145615.

Abstract

Objective: ESPRITE (Study 508; NCT03836924) evaluated the real-world safety, tolerability, and efficacy of adjunctive perampanel in patients aged ≥12 years with focal-onset seizures (FOS), with or without focal to bilateral tonic-clonic seizures (FBTCS), in India.

Methods: ESPRITE was a prospective, multicenter, single-arm, observational, Phase IV study with a 6-month Treatment Period. Patients were aged ≥12 years and had been prescribed perampanel for adjunctive treatment of FOS, with or without FBTCS. Assessments included incidence of treatment-emergent adverse events (TEAEs; primary endpoint), median percent reduction in seizure frequency per 28 days from baseline, 50% responder rates, and seizure-freedom rates.

Results: Overall, 200 patients were enrolled (199 patients in the Safety Analysis Set and 174 patients who completed all visits in the main efficacy analyses). TEAEs (all mild or moderate in severity) were reported in 18.1% (n = 36/199) of patients (the most common were dizziness [3.0%] and irritability [2.0%]). TEAEs leading to discontinuation of perampanel were reported in 2.0% of patients; no deaths or serious TEAEs occurred. At 6 months, median percent reduction in seizure frequency was 100.0%, 50% responder rate was 83.3%, and seizure-freedom rate was 49.4%.

Significance: Adjunctive perampanel (at a mean daily dose of 4 mg/day) was shown to be well tolerated and effective in patients aged ≥12 years with FOS, with or without FBTCS, from India.

70. Deshpande SS. (June 2024).

Osteotomy wedge angle - Aiming to achieve perfection with new device: Pre-clinical stage.

J Clin Orthop Trauma. 54:102474. doi: 10.1016/j.jcot.2024.102474.

Abstract

Introduction: The surgical execution of osteotomy requires precision in measuring the wedge angle. The pre-operative planning methods are plenty and so are few devices for high tibial osteotomy. But struggle happens for those bony areas other than proximal tibia where alignment correction is needed. The new device is proposed to address this surgical problem. The ease of measuring angle for bony wedge angle, in any bone, independent of its width and in any plane, is the question being solved with the proposed devices.

Methods: Two jig instruments have been shown in the study. First one the curved with direct angle measuring marking in degrees on the body. K wire is accepted through the tower exactly showing the desired angle. The second jig instrument is flat design with marking in millimeters. This device works on trigonometric principle of sum of angles of any triangle is equal to 180°. The jig can be removed leaving the k wires in place to complete the final osteotomy once confirmed.

Results: It's a pre-clinical stage study. The saw bone models show encouraging measurements and perfect execution of angle at the osteotomy site.

Discussion: HTO has been researched a lot with many options of surgical devices. The criticism of using known devices is the variable accuracy, especially for the smaller width of tibial metaphysis. One major limitation of these available instruments is they can be used only for proximal tibial metaphysis. For any other surgical sites like distal femur, distal tibia, distal humerus or tibial slope correction neither these HTO jigs will work nor there is any available universal instrument as such. The common misconception of one degree equal to 1 mm does not stand true at all bony sites. Hence there was a need to solve this problem with universal jig. I have designed two new devices which are currently at pre-clinical stage. The curve device has limitations which get corrected in straight device. The philosophy changes from one direct measurement with two tips of wires forming the angle in a curved device to indirect measurement by simple trigonometric calculation in a straight device. The proposed new device would work in any bone, for any trapezoidal wedge shape osteotomy using simple user-friendly k wires.

71. Shah D, Sahu D, Easwaran R, Kar A, Modi A, Tambe A, **Babhulkar A**, et.al. (June 2024).

Management of type III acromioclavicular joint dislocation: A Delphi consensus survey by Shoulder & Elbow Society, India (SESI).

Injury. 55 Suppl 2:111467. doi: 10.1016/j.injury.2024.111467

Abstract

Purpose: The study aimed to report the results of the Delphi survey conducted by the Shoulder, Elbow Society India (SESI), to achieve consensus on ambiguous topics in managing type III acromioclavicular joint (ACJ) dislocations.

Methods: This study was based on responses from the Shoulder Elbow Society India (SESI) panel of peer-selected twenty senior surgeons practicing shoulder orthopedics. They participated in two rounds of the survey to obtain consensus on several topics pertaining to the management of type III ACJ dislocations. Consensus was achieved when at least 70 % of the panel members selected at least a 4-point on a 5-point Likert scale.

Results: Our Delphi survey reached a consensus on seven topics of ambiguity. An anteroposterior and axillary view of the shoulder without any traction or weight in hand is sufficient in the setting of a suspected type III ACJ dislocation. Magnetic resonance imaging (MRI) is not routinely indicated in type III ACJ dislocation. Either cross-arm adduction X-rays or clinical examination may be used to distinguish between ISAKOS (International Society of Arthroscopy, Knee surgery and Orthopaedics Sports medicine) IIIA and B classification of ACJ to identify stable and unstable injuries. Conservative treatment can be offered to patients who have stable injuries and who are not high-demand individuals in acute type III ACJ dislocations. In conservative management of type III ACJ dislocation, a two-week sling suffices. Jones strapping has no clear advantage over a shoulder sling. Coracoclavicular reconstruction with an autograft is an acceptable way to treat symptomatic, chronic grade III ACJ dislocation.

Conclusion: The survey helped achieve consensus on several controversial issues related to type III ACJ dislocations. However, there remains ambiguity on the definition of chronicity of such dislocations, the necessity of bilateral Zanca views, and the duration of conservative trial before switching to a surgical line of management.

72. Muthu V, Agarwal R, Rudramurthy SM, Thangaraju D, Shevkani MR, Patel AK, Shastri PS, Tayade A, Bhandari S, Gella V, Savio J, **Prayag P**, et.al. (May 2024).(**)

Prevalence of co-existent COVID-19-associated pulmonary aspergillosis (CAPA) and its impact on early mortality in patients with COVID-19-associated pulmonary mucormycosis (CAPM).

Mycoses. 67(5):e13745. **https://doi.org/10.1111/myc.13745**

Abstract

Background: Data on mixed mould infection with COVID-19-associated pulmonary aspergillosis (CAPA) and COVID-19-associated pulmonary mucormycosis (CAPM) are sparse.

Objectives: To ascertain the prevalence of co-existent CAPA in CAPM (mixed mould infection) and whether mixed mould infection is associated with early mortality (≤7 days of diagnosis).

Methods: We retrospectively analysed the data collected from 25 centres across India on COVID-19-associated mucormycosis. We included only CAPM and excluded subjects with

disseminated or rhino-orbital mucormycosis. We defined co-existent CAPA if a respiratory specimen showed septate hyphae on smear, histopathology or culture grew Aspergillus spp. We also compare the demography, predisposing factors, severity of COVID-19, and management of CAPM patients with and without CAPA. Using a case–control design, we assess whether mixed mould infection (primary exposure) were associated with early mortality in CAPM.

Results: We included 105 patients with CAPM. The prevalence of mixed mould infection was 20% (21/105). Patients with mixed mould infection experienced early mortality (9/21 [42.9%] vs. 15/84 [17.9%]; p = 0.02) and poorer survival at 6 weeks (7/21 [33.3] vs. 46/77 [59.7%]; p = 0.03) than CAPM alone. On imaging, consolidation was more commonly encountered with mixed mould infections than CAPM. Co-existent CAPA (odds ratio [95% confidence interval], 19.1 [2.62–139.1]) was independently associated with early mortality in CAPM after adjusting for hypoxemia during COVID-19 and other factors.

Conclusion: Coinfection of CAPA and CAPM was not uncommon in our CAPM patients and portends a worse prognosis. Prospective studies from different countries are required to know the impact of mixed mould infection.

73. Solanki PK, Mandolkar M, Kulkarni P. (May 2024).

A Prospective Study to Evaluate the Prevalence of Microsatellite Instability in Endometrial Carcinoma by using Immunohistochemistry for Mismatch Repair Proteins as a Surrogate Marker.

Indian Journal of Medical and Paediatric Oncology. DOI: https://doi.org/ 10.1055/s-0043-1775853.

Abstract

Aim: Use of immunohistochemistry for mismatch repair (MMR) proteins to identify the prevalence of microsatellite instability (MSI) in cases of endometrial carcinoma and its subsequent correlation with various histopathological parameters.

Materials and Methods: The expression of MMR proteins, viz PMS2, MLH1, MSH2, and MSH6, were assessed in 114 endometrial cancer cases by immunohistochemistry using Dako EnVision FLEX system, on paraffin blocks of tumor tissue fixed in 10% formalin.

Results: We studied 114 endometrial cases for MMR protein expression, of which the majority were of endometrioid histologic subtype (n = 93, 81.6%), whereas the remainder comprised serous carcinoma (n = 12, 10.5%), clear cell carcinoma (n = 1, 0.9%), carcinosarcoma (n = 5, 4.4%), and dedifferentiated uterine carcinoma (n = 3, 2.6%). Twenty-one (18%) of these cases were found to be deficient for MMR proteins, of which 20 were of endometrioid histologic subtype and only 1 was dedifferentiated uterine carcinoma. Loss of MMR protein expression occurred in pairs of either PMS2 and MLH1 or MSH2 and MSH6.

Conclusion: MSI is one of the major molecular pathways contributing to tumorigenesis in endometrial carcinomas. Immunohistochemistry for MMR proteins is a highly sensitive and cost-effective alternative for molecular testing for MSI. It is also a great tool for screening patients for Lynch syndrome. Immunohistochemical testing for MMR should be offered to all patients of endometrial cancers.

74. Muthu V, Agarwal R, Rudramurthy SM, Thangaraju D, Shevkani MR, Patel AK, Shastri PS, Tayade A, Bhandari S, Gella V, Savio J, **Prayag P**, et.al. (May 2024).(**)
Computed tomography findings of COVID-19-associated pulmonary mucormycosis: Data from a multicenter retrospective study (Mucovi2), India.
Lung India. 41(3):221-224. doi: 10.4103/lungindia.lungindia_19_24. Epub 2024 Apr 30. PMID: 38687235; PMCID: PMC11093136.
Abstract
No abstract available.

75. Aloysius M, Goyal H, Nikumbh T, Shah N, Aswath G, John S, **Bapaye A,** Guha S, Thosani N. (May 2024).
Overall Polyp Detection Rate as a Surrogate Measure for Screening Efficacy Independent of Histopathology: Evidence from National Endoscopy Database.
Life. 14(6):654. https://doi.org/10.3390/life14060654
Abstract
Adenoma detection rate (ADR) is challenging to measure, given its dependency on pathology reporting. Polyp detection rate (PDR) (percentage of screening colonoscopies detecting a polyp) is a proposed alternative to overcome this issue. Overall PDR from all colonoscopies is a relatively novel concept, with no large-scale studies comparing overall PDR with screening-only PDR. The aim of the study was to compare PDR from screening, surveillance, and diagnostic indications with overall PDR and evaluate any correlation between individual endoscopist PDR by indication to determine if overall PDR can be a valuable surrogate for screening PDR. Our study analyzed a prospectively collected national endoscopy database maintained by the National Institute of Health from 2009 to 2014. Out of 354,505 colonoscopies performed between 2009–2014, 298,920 (n = 110,794 average-risk screening, n = 83,556 average-risk surveillance, n = 104,770 diagnostic) met inclusion criteria. The median screening PDR was 25.45 (IQR 13.15–39.60), comparable with the median overall PDR of 24.01 (IQR 11.46–35.86, p = 0.21). Median surveillance PDR was higher at 33.73 (IQR 16.92–47.01), and median diagnostic PDR was lower at 19.35 (IQR 9.66–29.17), compared with median overall PDR 24.01 (IQR 11.46–35.86; $p < 0.01$). The overall PDR showed excellent concordance with screening, surveillance, and diagnostic PDR ($r > 0.85$, $p < 0.01$, 2-tailed). The overall PDR is a reliable and pragmatic surrogate for screening PDR and can be measured in real time, irrespective of colonoscopy indication.

76. Sheth H, Nair A, Bhavsar R, Kamate M, Gowda VK, Bavdekar A, Kadam S, Nampoothiri S, Panigrahi I, Kaur A, Shah S, **Godbole k**, et.al. (May 2024).
Development, validation and application of single molecule molecular inversion probe based novel integrated genetic screening method for 29 common lysosomal storage disorders in India.
Human Genomics. 18(1):46. https://doi.org/10.1186/s40246-024-00613-9
Abstract
Background: Current clinical diagnosis pathway for lysosomal storage disorders (LSDs) involves sequential biochemical enzymatic tests followed by DNA sequencing, which is

iterative, has low diagnostic yield and is costly due to overlapping clinical presentations. Here, we describe a novel low-cost and high-throughput sequencing assay using single-molecule molecular inversion probes (smMIPs) to screen for causative single nucleotide variants (SNVs) and copy number variants (CNVs) in genes associated with 29 common LSDs in India.

Results: 903 smMIPs were designed to target exon and exon–intron boundaries of targeted genes (n = 23; 53.7 kb of the human genome) and were equimolarly pooled to create a sequencing library. After extensive validation in a cohort of 50 patients, we screened 300 patients with either biochemical diagnosis (n = 187) or clinical suspicion (n = 113) of LSDs. A diagnostic yield of 83.4% was observed in patients with prior biochemical diagnosis of LSD. Furthermore, diagnostic yield of 73.9% (n = 54/73) was observed in patients with high clinical suspicion of LSD in contrast with 2.4% (n = 1/40) in patients with low clinical suspicion of LSD. In addition to detecting SNVs, the assay could detect single and multi-exon copy number variants with high confidence. Critically, Niemann-Pick disease type C and neuronal ceroid lipofuscinosis-6 diseases for which biochemical testing is unavailable, could be diagnosed using our assay. Lastly, we observed a non-inferior performance of the assay in DNA extracted from dried blood spots in comparison with whole blood.

Conclusion: We developed a flexible and scalable assay to reliably detect genetic causes of 29 common LSDs in India. The assay consolidates the detection of multiple variant types in multiple sample types while having improved diagnostic yield at same or lower cost compared to current clinical paradigm.

77. Pissurlencar S, Joshi DS, Joshi S. (May-August 2024).
Tick manifestation of the upper eyelid.
Journal of Clinical Ophthalmology and Research. 2024 May-August;12(2):179-180. *DOI:* 10.4103/jcor.jcor_18_24

Abstract

No Abstract Available

78. Goel Y, Kurlekar U, Chitharanjan A, Beke AN. (May 2024).
Insulinoma Unmasked Post Sleeve Gastrectomy With Incidental Renal Cell Carcinoma: A Rare Case.
Cureus. 16(5):e60395. doi: 10.7759/cureus.60395.

Abstract

Insulinoma is a functional pancreatic neuroendocrine tumor (pNET). Usually benign and solitary, these tumors present with recurrent episodes of hypoglycemia due to insulin hypersecretion. It's a rare cause of post bariatric surgery hypoglycemia and hence poses a diagnostic challenge. Here, we report the first case of a 53-year-old male with insulinoma unmasked post sleeve gastrectomy with incidental renal cell carcinoma (RCC). He presented with symptoms of Whipple's triad after two months of sleeve gastrectomy done for morbid obesity. On further inquiry, the patient gave a history of an asymptomatic peripancreatic neuroendocrine tumor (NET) for the past 11 years. With a suspicion of insulinoma, biochemical workup followed by non-invasive imaging like GA-68 DOTA and CT triphasic abdomen scan was done to guide the diagnosis of an insulinoma which also detected a second primary tumor in

the right kidney, likely to be a malignant RCC. Following pancreatic mass excision with radical nephrectomy for right renal mass, histopathology (HPE) and immunohistochemistry (IHC) confirmed the diagnosis of an insulinoma and a right renal clear cell carcinoma. The patient was discharged with no further episodes of hypoglycemia. Hence, persistent hypoglycemia post bariatric surgery could be an indication of a hidden insulinoma and this possibility of synchronous tumors should be kept in mind when dealing with rare tumors like insulinoma.

79. Desai S, Goyal D, Gaitonde A, Osan P and Joshi S (April 2024)
Heavily calcified synovial sarcoma leading to chronic thigh pain and swelling [Editorial]
Skeletal radiol. 53(4): 821-24
No abstract available.

80. **Godbole G**, Morey G, Tawar N, Rathod A. (April 2024).
Evaluating the Accuracy of O'Tracker: A Stick-To-Skin Wireless BBT Sensor to Identify Fertility Window.
International Journal of Health Technology and Innovation. 3(01):5-10. DOI: https://doi.org/10.60142/ijhti.v3i01.02

Abstract

Objective: The study identifies the event of ovulation using an IoT-based device called "O'Tracker" in contrast with the transvaginal ultrasound in trying to conceive women.
Methods: This prospective study includes a total of 30 cycles from 27 women who were trying to conceive. They were asked to use the O'Tracker device from the 10th day of their menstrual cycle to the 18th day, i.e., 8 days for 7 hours per night.
Result: In the conclusive evaluation, a total of 30 cycles underwent scrutiny, wherein the O'Tracker predictions of the ovulation window were aligned with physicians' predicted ovulation window from the USG reports in 27 cycles, indicating a commendable accuracy rate of 90%. Upon proximity to the ovulation window predicted by O'Tracker with those derived from the USG report (considered as the ground truth for validation) the concordance was observed in 25 out of 27 accurately predicted ovulatory cycles. Furthermore, when compared to the physician-predicted ovulation window from USG reports, O'Tracker exhibited concordance in 23 out of 27 cycles.
Conclusion: The study evaluation reveals that O'Tracker attains a 90% accuracy in predicting ovulation as compared to physician assessment, demonstrating a match rate exceeding 90% with fertile windows ascertained through ultrasound monitoring. This level of precision stands on with established traditional diagnostics methodologies. O'Tracker manifests a user-friendly and accessible digital ovulation monitoring platform.

81. Kakkar B, Palnitkar S, Gadhikar H, Ketkar S, Bhagwat S, Kanani Y, Oswal C, Akole PV, Gadge S. (April 2024).
Role of therapeutic plasma exchange in treatment of the hypertriglyceridemia-induced acute pancreatitis: Case report and literature review.
Asian Journal of Transfusion Science. 10(10)-1-4. *DOI:* 10.4103/ajts.ajts_207_23

Abstract

Hypertriglyceridemia-induced acute pancreatitis (HTG-AP) is associated with a more severe clinical course than acute pancreatitis due to other etiologies. Presently, these patients are managed with dietary restrictions, analgesia, lipid-lowering agents, insulin/heparin dual therapy, and supportive care to prevent organ failure. Apart from these conventional therapies, therapeutic plasma exchange (TPE) is another potential treatment that is being performed as it results in rapid reduction in serum triglycerides and inflammatory cytokines, thus, leading to drastic improvements in clinical and laboratory findings and patient outcomes. Here, we report our experience of using TPE for HTG-AP in our patients.

82. Sadhwani M, Kulkarni V, Patki A, Deshpande A. (April-June 2024).
Cutaneous Kikuchi's Disease in Pediatric Age Group.
Indian Journal of Paediatric Dermatology. 25(2):146-149. *DOI:* 10.4103/ijpd.ijpd_24_24

Abstract

Kikuchi's disease is also known as histiocytic necrotizing lymphadenitis. It is a rare, idiopathic, self-limiting disease presenting with fever, malaise, and generalized lymphadenopathy, mostly in young females, although it has been occasionally reported in the pediatric population. Cutaneous manifestations are visible in around 16%–40% of cases, ranging from nonspecific papules, plaques, nodules, and ulcers favoring the face, upper extremities, and trunk. We report here a case of an 11-year-old child who presented with fever, leukopenia, lymphadenopathy, and cutaneous eruption. A final diagnosis of Kikuchi's disease was established after a lymph node biopsy report.

83. **Jagtap V**, Lila A, Karlekar M, Sarathi V, Bandgar T. (April 2024).
Spontaneous Adrenal Hemorrhage in a Pregnant Woman With Glucocorticoid Resistance Syndrome.
JCEM Case Reports. 2(4): luae052. https://doi.org/10.1210/jcemcr/luae052

Abstract

Glucocorticoid resistance syndrome is a rare disorder with no genetically proven cases reported from India; in addition, there are no descriptions available regarding its management during pregnancy. A 27-year-old woman, hypertensive since the age of 17 years, presented with hypokalemic paresis. She reported regular menses and acne. On investigation, she had elevated serum cortisol that remained unsuppressed after a low-dose dexamethasone suppression test. Genetic analysis revealed a novel, homozygous missense variant in exon 5 of the *NR3C1* gene confirming glucocorticoid resistance syndrome. She was managed with oral dexamethasone followed by tapering of antihypertensive drugs. A year later, she conceived with assisted reproductive techniques when dexamethasone was replaced with prednisolone, necessitating the reintroduction of antihypertensive drugs to maintain normotension and potassium supplements to manage hypokalemia. She presented with acute abdomen at 36 weeks of gestation; evaluation revealed right adrenal hemorrhage, which was

managed conservatively. Postpartum, the right adrenal lesion reduced in size and an underlying right adrenal myelolipoma was unveiled.

84. Diwan S, Shivamallappa S, Timane R, **Pai P**, Gupta A. (April-June 2024).
Pathways of dye spread after injections in the paraspinal spaces—A cadaveric study.
Saudi Journal of Anaesthesia. 18(2):181-186. *DOI:* 10.4103/sja.sja_582_23

Abstract

Background: The erector spinae plane (ESP) block is the most sought-after block since its inception. However, it is more of dorsal rami block with unpredictable ventral diffusion to the paravertebral area. We injected dye in ESP and other paraspinal spaces to study and compare the dye diffusion pattern along the neuroaxis and paraspinal region in human cadavers.

Methods: In six soft-embalmed cadavers (12 specimens), 20 mL methylene blue dye (erector spinae plane and paravertebral space) or indocyanine green dye (inter-ligament space) was injected bilaterally using an in-plane ultrasound-guided technique at the level of the costotransverse junction of fourth thoracic vertebrae. Dye spread was evaluated bilaterally in the coronal plane in the paravertebral and intercostal spaces from the 1st and the 12th rib. Axial and sagittal sections were performed at the level of the 4th thoracic vertebrae. After cross sections, the extent of dye spread was investigated in ESP, inter-ligament, and paravertebral spaces. The staining of the ventral and dorsal rami and spread into the intercostal spaces was evaluated.

Results: ESP injection was mainly restricted dorsal to the costotransverse foramen and did not spread anteriorly to the paravertebral space. The paravertebral injection involved the origin of the spinal nerve and spread laterally to the intercostal space. The inter-ligament space injection showed an extensive anterior and posterior dye spread involving the ventral and dorsal rami.

Conclusions: Following ESP injection, there was no spread of the dye anteriorly to the paravertebral space and it only involved the dorsal rami. Inter-ligamentous space injection appears to be the most promising block as dye spread both anteriorly to paravertebral space and posteriorly toward ESP.

85. Nimbalkar S, Dave H, Budh H, **Morgaonkar V**, Patel D. (April 2024).
Post-discharge home kangaroo mother care follow-up study in rural Gujarat.
Journal of Family Medicine and Primary Care. 13(4):1379-1383.

Abstract

Background: Continuation of kangaroo mother care (KMC) at home is vital for improved infant survival and development. Hence, it is essential to understand potential enablers and barriers to home KMC provision.

Methodology: This observational study was conducted in rural Gujarat. KMC was initiated for all low-birth-weight (LBW) neonates during the hospital stay and were advised to continue home KMC on discharge. The mothers of these LBW neonates were interviewed using a structured questionnaire during follow-up visits or via telephone.

Results: A total of 100 mothers were interviewed, and 98 practiced home KMC. Mothers' mean age was 24.41 (±3.1) years, and infants' mean age was 3.48 (±1.81) months. The mean weight of neonates at discharge was 1.85 (±0.28) kg. Out of the 104 neonates (96 singleton

pregnancies and four twins), 76 (73.07%) were pre-term. 31% mothers provided 4–6 hours of daily KMC. 60% provided KMC for less than 1 hour during each session, while 36% of mothers provided each KMC session for 1–3 hours. 74% of mothers received family support, and 62% faced difficulties in home KMC provision. 88% of mothers were homemakers, and 53% had other children to care for. 51% mothers pre-maturely discontinued KMC provision. 83% of the mothers reported fatigue or pain during KMC provision.
Conclusion: Lack of family support, other household responsibilities, and other children to care for were major barriers leading to pre-mature discontinuation of home KMC.

86. Desai S, Goyal D, Gaitonde A, Osan P, Joshi S. (April 2024).
Test Yourself: Chronic thigh pain and swelling.
Skeletal Radiol. 53(4):801-804. doi: 10.1007/s00256-023-04476-4. Epub 2023 Oct 13. PMID: 37831149.
Abstract
No abstract available.

87. Rosenthal VD, Jin Z, Yin R, Sahu S, **Rajhans P**, Kharbanda M, Nair PK, Mishra SB, Chawla R, Arjun R, Sandhu K. (April 2024).
Assessing the impact of a multidimensional approach and an 8-component bundle in reducing incidences of ventilator-associated pneumonia across 35 countries in Latin America, Asia, the Middle East, and Eastern Europe.
Journal of Critical Care. 80:154500. doi: 10.1016/j.jcrc.2023.154500.
Abstract
Background: Ventilator associated pneumonia (VAP) occurring in the intensive care unit (ICU) are common, costly, and potentially lethal.
Methods: We implemented a multidimensional approach and an 8-component bundle in 374 ICUs across 35 low and middle-income countries (LMICs) from Latin-America, Asia, Eastern-Europe, and the Middle-East, to reduce VAP rates in ICUs. The VAP rate per 1000 mechanical ventilator (MV)-days was measured at baseline and during intervention at the 2nd month, 3rd month, 4-15 month, 16-27 month, and 28-39 month periods.
Results: 174,987 patients, during 1,201,592 patient-days, used 463,592 MV-days. VAP per 1000 MV-days rates decreased from 28.46 at baseline to 17.58 at the 2nd month (RR = 0.61; 95% CI = 0.58-0.65; P < 0.001); 13.97 at the 3rd month (RR = 0.49; 95% CI = 0.46-0.52; P < 0.001); 14.44 at the 4-15 month (RR = 0.51; 95% CI = 0.48-0.53; P < 0.001); 11.40 at the 16-27 month (RR = 0.41; 95% CI = 0.38-0.42; P < 0.001), and to 9.68 at the 28-39 month (RR = 0.34; 95% CI = 0.32-0.36; P < 0.001). The multilevel Poisson regression model showed a continuous significant decrease in incidence rate ratios, reaching 0.39 (p < 0.0001) during the 28th to 39th months after implementation of the intervention.
Conclusions: This intervention resulted in a significant VAP rate reduction by 66% that was maintained throughout the 39-month period.

88. **Desai VS**, Joseph BE. (April 2024).
Voice Therapy Outcome Post Transoral Thyroarytenoid Myoneurectomy in Adductor Spasmodic Dysphonia: A Case Series.

J Voice. S0892-1997(24)00060-2. doi: 10.1016/j.jvoice.2024.02.023. Epub ahead of print. PMID: 38604899.

Abstract

Objectives: Postoperative evaluations of patients, who undergo of transoral thyroarytenoid myoneurectomy using CO2 laser for the treatment of Adductor Spasmodic Dysphonia (ASD), reveal some residual laryngeal symptoms such as intermittent spasms, vocal effort, and stiffness in laryngeal muscles which can be identified on videolaryngo-stroboscopy (VLS) by patterns of Muscle Tension Dysphonia (MTD) and mucosal wave, and as deviations in acoustic perceptual measures. This study aims to document these vocal symptoms observed postoperatively, and most importantly highlight the need for voice therapy postoperatively and report the short-term vocal outcomes post-therapy.

Study design: Retrospective case series.

Method: The case series includes five patients, three females and two males, in the age range of 40 to 76years, who underwent transoral thyroarytenoid myoneurectomy using CO2 laser for severe ASD. The assessment protocol to document pretherapy (3-week postop) and post-therapy (after 1month of therapy) findings included VLS, Maximum Phonation Time (MPT), VHI-10 GRBAS, and Multi-Dimensional Voice Profile (MDVP) (acoustic voice analysis). Voice therapy regimen included Resonant Voice Therapy, semi-occluded vocal tract exercises, Vocal Function Exercises, and/or breath support exercises customized for individual symptoms.

Result: MTD of varying grades, MPT less than 10 seconds, deviant F0, mild to moderate degrees of perceptually rough and predominantly strained voice were noted in the pretherapy evaluation. Following 1month of voice therapy, changes noted were a reduction in strained and rough voice quality and an increase in MPT and muscle tension. Improvement of almost all parameters of MDVP tended towards normative as compared to pretherapy including F0.

Conclusion: Voice therapy initiated at the earliest recovery stage postoperatively does lead to positive short-term vocal outcomes in patients with severe ASD. It is necessary to have long-term follow-ups and aim for the maintenance of satisfactory vocal outcomes.

AACR 2024_CPR –

https://cancerprogressreport.aacr.org/wp-content/uploads/sites/2/2024/09/AACR_CPR_2024.pdf

Training and CMEs

Topic	Date	Speaker
Training-cum-seminar program on guidelines for clinical research [For EC members, Research staff and Research consultants] Training organizers – Dr Shweta A. Chitharanjan, In-charge regulation and Member Secretary, EC (CTR), DMHRC, Pune Dr Amrita P. Prayag, In -charge regulation and Member Secretary, EC (BMHR), DMHRC, Pune	9 March 2025	Patron, support and Director Dr Dhananjay S. Kelkar Preamble Dr Amrita P. Prayag (DMHRC, Pune) Speakers – (Topic) – Dr Ravindra Ghooi (ICH-GCP E6 [R3] guidelines) Dr. Aditi Apte (ICMR guidelines for biomedical and health research involving human participants) Dr Sarita Mulkalwar (SAE reporting, causality analysis and compensation)
Training on rules and guidelines in Clinical research (NDCT 2019, ICH-GCP and ICMR guidelines) [For Ethics Committee members, SAC members and Research staff] Training organizers – Dr Shweta A. Chitharanjan, Member Secretary, EC (CTR), DMHRC, Pune and Dr Amrita P. Prayag, Member Secretary, EC (BMHR), DMHRC, Pune	6 October 2024	Patron, support and Director Dr Dhananjay S. Kelkar Speakers – Preamble Dr Amrita P. Prayag (DMHRC, Pune) Trainer (s) Dr Ravindra Ghooi (ERI, Pune)

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Dr Sumant Patil

2] Enhancing awareness about genetic counselling and testing for inherited cancers

Dr Gaurav Karve and Dr Aditi Dastane

Covid -19 pandemic

Covid-19 pandemic information [2021-2024] – taken from our previous annual reports.

Our research review committees

OUR RESEARCH REVIEW COMMITTEES:

Preamble:

We strive to conduct scientifically sound and ethical research to ensure that the backbone of medical science and ethics are adhered to.

To this end, we have different committees to review research as enlisted below.

The research projects are first reviewed by the members of Scientific Advisory Committee (SAC) and are implemented only after the approval of the Institutional Ethics Committees (IECs) of DMHRC.

All the above-mentioned research review committees are constituted by our Medical Director, Dr Dhananjay S. Kelkar, considering the qualifications, training, experience, acumen – and subject matter prowess of each member.

SCIENTIFIC ADVISORY COMMITTEES:

A] SAC MEMBERS: FOR REVIEW OF IN-HOUSE // INVESTIGATOR-INITIATED RESEARCH AND CLINICAL TRIAL RESEARCH

Sr. No	Name	Qualification	Designation
1.	Dr Jitendra Deuskar	M.S. (Gen. Surgery)	Honorary Member
2.	Dr Amruta Beke	M.Ch. (Oncosurgery)	Honorary Member
3.	Dr B. Y. Pawar	M.D (Medicine) IDCC	Honorary Member
4.	Dr Prashant Mishra	DNB (Cardiology), Post-Doctoral fellowship – Interventional Cardiology	Honorary Member
5.	Dr Amruta Bedekar	MD (Anesthesiology)	Honorary Member
6.	Dr Ashish Ranade	MS (Orth), MRCS, Fellowships in Pediatric Orthopedics, Pediatric Spine & Limb Reconstruction (USA)	Honorary Member
7.	Dr Amrita Prayag	MBBS, MS (Pharmacology)	Member Secretary [In-house research]
8.	Dr Shweta Chitharanjan	BHMS, PGDCR	Member Secretary [Clinical Trial Research]
9.	Dr Vaijayanti Pethe	PhD (Biochemistry)	Honorary Member

SCIENTIFIC ADVISORY COMMITTEE [CONTD.]

B] SAC MEMBERS : FOR REVIEW OF DNB RESEARCH

Sr. No	Name	Qualification	Designation
1	Dr Dhananjay Kelkar	MS (Gen Surgery)	Head of the Institute
2	Respective Student's Guide		Guide
3	Dr Anand Deshpande	DNB, DCH	Local Faculty Professor B. J. Medical College
4	Dr Asawari Kanade	Ph. D (Biometry and Nutrition)	Statistician
5	Dr Anuja Joshi	MD, Microbiology	Basic Science Faculty
6	Dr Pratibha Kulkarni	MD, DGO	Honorary Member
7	Dr Anushree Prabhakaran	MD (Internal Medicine), DM (Clinical Haematology)	Honorary Member
8	Dr Amruta Bedekar	MD (Anesthesiology)	Honorary Member
10.	Dr Jitendra Deuskar	M.S. (Gen. Surgery)	Honorary Member
11.	Dr Sameer Jog	MD, EDIC, IDCCM	Honorary Member
12.	Dr Medha Kshirsagar	MD (Pharmacology)	Honorary Member
13.	Dr Asmita Bhave	M.S. (Surgery)	Honorary Member

INSTITUTIONAL REVIEW BOARD: ETHICS COMMITTEES AT DMH

A] OUR EC-1 (CTR) MEMBERS: FOR REVIEW OF CLINICAL TRIAL RESEARCH

Sr No	Name	Qualification	Role
1	Dr Avinash L. Joshi	Ph.D. (Biochemistry)	Chairperson (External)
2	Dr Sarita Mulkalwar	M.D. (Pharmacology)	Co-chairperson (External)
3	Dr B. Y. Pawar	M.D, IDCC (Medicine)	Clinician and Joint- Member Secretary
4	Dr Jitendra Deuskar	M. S. (Surgery)	Clinician (External)
5	Dr Sujala Watve	Ph.D. (Psychology)	Social Scientist (External)
6	Dr Medha Kshirsagar	M.D. (Pharmacology)	Basic Medical Scientist (External)
7	Dr Shraddha Yadav	M.D. (Pharmacology)	Basic Medical Scientist (External)
8	Adv. Pravin Joshi	B.Com., LLM (Law)	Legal Expert (External)
9	Mrs Hemlata Hirve	B.A. (Sociology)	Lay Person (External)
10	Dr Shweta Chitharanjan	BHMS PGDCR	Member Secretary

INSTITUTIONAL REVIEW BOARD: ETHICS COMMITTEES AT DMH [CONTD.]

B] OUR EC-2 (BMHR) MEMBERS: FOR REVIEW OF IHR/DNB PROJECTS

1.	Dr Jitendra Deuskar	M. S., (Surgery)	Chairman (External)
2.	Dr Pratibha Kulkarni	M.D. (Ob/Gyn)	Co- Chairperson (External)
3.	Dr Sameer Jog	MD, EDIC, IDCCM	Clinician
4.	Dr Mousami Dalvi	MBBS, M.D (Microbiology)	Basic Medical Scientist
5.	Dr Vanita Patwardhan	Ph.D. (Psychology)	Ethicist (External)
6.	Adv. Vineeta Kale	M.A. LLB (Law)	Legal Expert (External)
7.	Mr Pradeep Gharpure	B.E. (Mechanical Engineering)	Lay Person (External)
8.	Dr Amrita Prayag	MBBS MS (Pharmacology)	Member Secretary

Invited articles

GBS outbreak in Pune [January – March 2025]: Pediatric review at DMH

Dr. Sumant Patil, MD(Paed), MRCPCH (UK), DCH(UK), In Charge Paediatric Intensivist, Deenanath Mangeshkar Hospital, Pune

Enhancing Awareness about Genetic Counselling and Testing for inherited cancers

Dr. Gaurav Karve and Dr. Aditi Dastane, Department of Molecular Diagnostics, Deenanath Mangeshkar Hospital, Pune

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GBS outbreak in Pune [January – March 2025]: Pediatric review at DMH

Dr. Sumant Patil, MD(Paed), MRCPCH (UK), DCH(UK)

Fellow Paed. Crit. Care and Neonatology (UK)

In Charge Paediatric Intensivist, Deenanath Mangeshkar Hospital, Pune

Guillian-Barre Syndrome (GBS) is a rare autoimmune neurologically debilitating disease which is usually triggered by waterborne infections and doesn't usually have outbreaks. It is the most common cause of acute flaccid paralysis worldwide. (1) GBS increases linearly with age, peaking at 70-80 years, with a maximum of 4-5 cases per 100,000 person years (PYs). In contrast, the disease is much rarer in children and adolescents, with an incidence of 0.62 cases per 100,000 PYs (95%CI 0,52-0,75) in 0-9-year-olds, and 0.75 cases per 100,000 PYs (95%CI 0.60-0.97) in 10-19- 1 year-olds.(1)

Overall incidence of GBS in children in various studies worldwide is between 0.6 to 4 per 100,000 population. Few studies from central Europe showed need for ventilator in nearly 16% of children with GBS.(2) There are 4 common variants of GBS and 3 more uncommon ones.The classic variants are acute demyelinating inflammatory polyneuropathy (AIDP) und acute motor axonal neuropathy (AMAN). These are characterised by rapidly progressing, ascending symmetrical weakness, with attenuation or loss of muscle proprioceptive reflexes. Amongst paediatric patients in the peak phase of the disease, 75% can no longer walk unaided, 30% are tetraparetic, 35-50% show cranial nerve involvement, and 15-20% have respiratory failure and/or autonomic dysfunction. Furthermore, up to 70% suffer from neuropathic pain, which can be severe and occasionally occur as the first symptom. Localised forms of GBS include Miller Fisher Syndrome (MFS) (cranial nerve affection and ataxia, areflexia, serum anti-GQ1b antibody detection in >90% cases) and the pharyngeal-cervical-brachial variant (predominantly bulbar and neck weakness, serum IgG antibodies against GT1a frequently detected), both of which are extremely rare in childhood.(3) Although most children with GBS have a favorable prognosis, respiratory insufficiency is one of the most severe complications of GBS. Respiratory insufficiency is a potential life-threatening complication of GBS and it is associated with higher incidence of morbidity. (4,5)

Approximately 60% of patients with GBS have a previous episode of gastrointestinal or respiratory infection, caused from a bacterium or a virus, weeks before the onset of neurological symptoms (6). Campylobacter jejuni is the most frequent pathogen associated with GBS which usually causes gastroenteritis several weeks before the beginning of GBS symptoms (7). Whatever GBS outbreaks are known they were associated with contaminated water and food , and mainly Campylobacter Jejuni as the culprit organism. The largest GBS outbreak in the world was observed in Peru in May to July 2019, wherein 683 cases of GBS were diagnosed and treated. (8)

The GBS outbreak in Pune in Jan-March 2025 was one of the largest outbreaks of GBS worldwide and largest in India so far. 225 patients were reported until March 2025 during this period all over Pune. (9,10) It was first reported at Deenanath Mangeshkar Hospital (DMH) with patients admitted from nearby Sinhagad road area which was the epicenter of outbreak, it later spread to remaining parts of Pune but with reduced and variable intensity. DMH alone had reported and treated 38 cases during this outbreak out of which 12 were children. The investigations revealed Campylobacter jejuni and Norvo virus in stool samples which triggered this autoimmune cascade of GBS outbreak suggesting contaminated water and food source.

Out of total 12 children who were diagnosed with GBS, five required mechanical ventilation, others had progressive ascending and variable motor weakness which improved after starting treatment in PICU. The children who needed ventilatory support were shown to have positive antibodies for GQ1B,GM1 and GD1B suggesting severe varieties of GBS .These are antiganglioside antibodies related to different clinical presentations of GBS: anti-GM1 antibodies have been associated with a pure and severe motor form of GBS (acute inflammatory demyelinating polyneuropathy, AIDP) (11), and anti-GD1a is associated with the axonal form (acute motor axonal neuropathy, AMAN) (12), while Miller Fisher syndrome (MFS), a variant of GBS with oculomotor weakness and ataxia, is strongly associated with anti-GQ1b antibodies (13).

The four children with severe form of GBS needed a prolonged ventilatory support with tracheostomy up to 3 months with significant ICU support as they were associated with multiple fluctuating autonomic disturbances and frequent episodes of hospital acquired infections. All children admitted in PICU during this period received Intravenous Immunoglobulins (IVIG) which was the standard , effective treatment for GBS. The other 9 children not requiring any respiratory support had a short PICU stay for 7-10 days and subsequently discharged from hospital in next 5-6 days . Our centre did not report any deaths related to GBS or its complications including children and adults. All children that were discharged home post recovery had minimal proximal muscle weakness although were able to walk independently and mobilise normally. Looking back into our records over last 10 years , there were total 42 children with GBS admitted and discharged with full recovery, that comes to annually 4 GBS admissions in PICU. During this outbreak we had more than 3 times annual admissions in PICU within a span of 3 months. This emphasises the severity and the large volume of case load during this outbreak eventually making it India’s largest outbreak of GBS so far.

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Enhancing Awareness about Genetic Counselling and Testing for inherited cancers

Dr. Gaurav Karve and Dr. Aditi Dastane, Dept. of Molecular diagnostics, DMH, Pune

Germline genetic testing has emerged as a pivotal component in the management of inherited / hereditary cancers, providing valuable insights into individual risk, guiding screening protocols, and informing treatment decisions. In the Indian context, comprehending the efficacy of such testing is paramount, considering the country's distinctive demographic and genetic profile.

1. Incidence of hereditary cancers:

- Overall breast cancer is the most common cancer among Indian women, with ~5–10% of those having a hereditary predisposition. A similar distribution is also seen in Colorectal, Endometrial and ovarian with the proportion being slightly higher in ovarian cancers (5–15%) (1,3,6,7,8,12).
- Among males, prostate cancer incidence in India has exhibited a consistent upward trend. Urban registries report higher age-adjusted incidence rates (AAR) per 100,000 individuals: Delhi at 11.8 and Mumbai at 9.7. Regrettably, considerable cases are diagnosed at advanced metastatic stages, emphasizing the urgent need for early detection strategies (3).
- Germline syndromes may account for up to 5–10% of pediatric leukemias and 1–2% of adult MDS/AML cases. Some of these syndromes are associated with other features like cytopenias, immune dysfunction, or developmental abnormalities. These inherited cancers, though less common than sporadic cases, carry significant implications for early detection, risk-reducing strategies, and family screening (5).

2. Risk Associated with Genetic Variants:

Inherited cancer syndromes are genetic conditions that confer an elevated susceptibility to cancer development due to the presence of specific pathogenic variants in designated genes. These variants are transmissible from one generation to the next. Although comprehensive Indian-specific data are limited, international studies offer valuable insights. A few common and most relevant genes are discussed below:

- **BRCA genes :**

  Among women with early-onset breast cancer or a strong family history, the prevalence of BRCA mutations is significantly higher. BRCA1 mutations are more often associated with triple-negative breast cancers, while BRCA2 mutations are more linked to hormone receptor-positive subtypes. In ovarian cancer, BRCA1 mutations account for approximately 10–15% of cases, and BRCA2 for around 5%. In men, BRCA2 mutations are found in about 1–2% of all prostate cancer cases, but in high-risk or familial cases, this rises to 5–6%. The lifetime risk of developing breast cancer is up to 70% for BRCA1 mutation carriers and up to 60% for BRCA2. The ovarian cancer risk is approximately 40–45% for BRCA1 and 15–20% for BRCA2. These genes are crucial in guiding screening, prevention, and treatment decisions in hereditary cancer syndromes (3,6,7).

- **MMR genes:**

  MMR (Mismatch Repair) genes—primarily MLH1, MSH2, MSH6, and PMS2—play a critical role in correcting DNA replication errors. Inherited mutations in these genes cause Lynch syndrome, the most common hereditary colorectal cancer syndrome, accounting for 2–4% of all colorectal cancer cases. Individuals with Lynch syndrome have up to an 80% lifetime risk of developing colorectal cancer, often at a younger age than the general population. They also face a 20–60% risk of

endometrial cancer, making it the second most common cancer in this syndrome. Other associated cancers include ovarian (10–15%), gastric, small bowel, urinary tract, hepatobiliary, and certain brain tumors. MSH2 and MLH1 mutations are linked to higher cancer risks, while MSH6 and PMS2 are associated with later onset and lower overall risk. MMR gene mutations lead to microsatellite instability (MSI), a hallmark of Lynch-associated tumors. Identifying these mutations not only enables tailored cancer surveillance and preventive strategies but also guides treatment decisions, including the use of immunotherapy in MSI-high tumors (1,8,9,12).

- **Hematological malignancies:**

  GATA2 gene: GATA2 gene abnormalities resulting in loss of function are associated with upto 15% of familial childhood/adolescent MDS cases with around 60% of affected individuals developing leukemia by age 30 (4)
  RUNX1 familial platelet disorder: Pathogenic RUNX1 variants increase lifetime hematologic malignancy risk of 35–45%, most commonly AML/MDS (4)

Cancer Type	Estimated Annual Cases (India)	Estimated Hereditary Fraction	Common Genes
Breast	~178,000	~5%, up to 29% in high-risk groups	BRCA1/2, TP53, PALB2
Ovarian	~45,700	~5%, up to 25% in screened cohorts	BRCA1/2, MMR
Endometrial	—	~2%	MMR (Lynch)
Colorectal	~38,000 deaths in 2022	~3%	MMR (Lynch), APC
Myelodysplastic syndrome			GATA2, ANKRD26
Myeloid Leukemia		6–10%	ETV6, RUNX1,
Adult ALL		8	TP53, IKZF1, ETV6, RUNX1

References:- (1,3,5,8,12)

3. Common indications for genetic testing:

- Any Early-onset breast cancer (<50) or a triple negative (ER/PR/HER2-) breast cancer <60, Male breast cancer at any age.
- Early-onset colon, uterine, pancreatic, diffuse gastric or renal cancer (under <50).
- Ovarian/fallopian tube cancer at any age.
- Medullary thyroid cancer or adrenocortical carcinoma at any age.
- Multiple primary cancers in one individual (e.g. bilateral breast cancer; breast/ovarian; colon/uterine)
- Individuals with multiple and/or early-onset gastrointestinal polyps (multiple polyposis, >15 GI polyps, or >5 hamartomatous or juvenile polyps).
- Rare or unusual tumors or physical findings
- Family history of cancer in one or more 1st degree family member (parents, siblings).

4. Screening tests and Risk Reduction for early detection**:**

- Women aged 45+ face alarmingly low uptake of mammography (~1–1.7%), and randomized trials demonstrate that clinical breast examination (CBE) reduces mortality in women over 50 . Emerging tools like low-cost Mammography show >85% sensitivity and specificity, offering promising early detection options. In colorectal cancer, colonoscopy screening in South India detected polyps in ~12% of asymptomatic adults, with sigmoidoscopy shown to reduce colorectal cancer specific and all-cause mortality. However, real-world colonoscopy uptake remains low (~7%) (1,3,9,12).
- When detected early, prostate cancer confined to the prostate gland has a survival rate approaching 100%, with nearly 80% of patients surviving ten years or more. In contrast, those diagnosed at a metastatic stage have a 5-year overall survival rate of 29% (3).
- Screening for ovarian cancer lacks validated population-based strategies in India. For women with a known hereditary predisposition, especially BRCA1 or BRCA2 mutations Risk-Reducing Salpingo-Oophorectomy (RRSO) reduces ovarian cancer risk by over 80–90% and improves overall survival in high-risk women. Transvaginal ultrasound (TVUS) and serum CA-125 are sometimes used at regular intervals in high-risk women who defer surgery (3).
- Hematological cancers currently have no formal national screening protocols; early risk reduction relies on family history, genetic counseling, and vigilant monitoring.
- Across all cancer types, regular health check-ups—including CBE, PSA testing, colonoscopy, and routine hematologic panels—have been shown to reduce mortality by ~45% . While uptake remains suboptimal, these strategies offer clear benefits in early detection, incidence reduction, and improved survival.

5. Role in treatment of affected cases:

Germline testing for inherited cancer syndromes offers significant clinical value across a wide range of cancers for personalized treatment strategies.

- Patients with BRCA mutations may benefit from PARP inhibitor group of drugs. A Tata Memorial Centre study showed median progression-free survival (PFS) of 8–10 months, compared to 3–4 months with standard chemotherapy alone in similar platinum-resistant settings. Overall survival was also notably better (approximately 15 months vs 8–9 months), with response rates nearly doubling (47% vs ~20–25%) (3,4,11).
- Similarly, in mismatch repair-deficient (MSI-H) colorectal cancer, a South Indian study found that patients with MSI-H tumors who were appropriately identified and managed had a mean overall survival of 76.6 months, compared to 65.1 months in microsatellite stable (MSS) patients who received standard treatment. This highlights the prognostic value of genetic testing and the potential to avoid unnecessary chemotherapy in certain subgroups (2,10).
- In hematologic cancers, germline mutations influence donor selection for stem cell transplants and long-term monitoring (6).

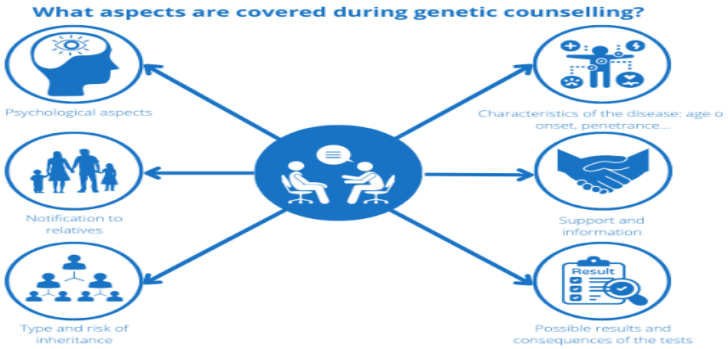
Thus, incorporating germline testing into oncology practice not only improves early detection and prevention but also enables precision treatment and informed decision-making for patients and their families.

6. Utility in Family Testing

Identifying germline mutations in cancer patients has profound implications for their relatives. For instance, if a daughter inherits a pathogenic BRCA gene variant from her father, she carries a heightened risk (approximately 50-60%) of developing breast and ovarian cancer by the age of 60. Conversely, if his son inherits the BRCA variant, he is highly predisposed (approximately 50%) to developing prostate cancer before the age of 70. Therefore, genetic testing not only benefits the affected individual but also identifies risk to family members. This proactive approach enables at-risk individuals to undergo enhanced surveillance and adopt risk-reducing strategies, potentially leading to earlier detection and improved outcomes.

7. Genetic Counseling

Pre-test counseling ensures that individuals fully comprehend the implications, benefits, and limitations of genetic testing before proceeding. Post-test counseling assists individuals in making informed decisions based on their genetic results. It facilitates family communication, ensuring relatives are informed and can take preventive measures. Genetic counseling encompasses more than testing; it empowers individuals and families to take proactive steps in managing hereditary prostate cancer risk.



8. Barriers and challenges to genetic counseling (GC) and testing

Barrier	Impact / Data
Workforce shortage	Oncologists handling GC; training gap
Cost of testing	89% cite expense; 70.9% lack access
Awareness/education	Only 29% aware; stigma & fatalism common
System integration & policy	Lack of insurance, EHR integration
Psychological concerns	Fear of discrimination and distress

Reference:- Verma, Amit, et al. "Mainstreaming genetic counseling for BRCA testing into oncology clinics–Indian perspective." *Indian Journal of Cancer* 56.Suppl 1 (2019): S38-S47.

- The cost of genetic testing, lack of public awareness, and limited access to affordable services remain the most significant challenges to the implementation of genetic counseling and testing for hereditary cancer syndromes in India.
- High out-of-pocket expenses make testing unaffordable for many, while limited awareness among both patients and healthcare providers further reduces uptake. To address these barriers effectively, a multi-pronged approach is essential. Enhancing awareness within the medical fraternity—particularly among oncologists, gynecologists, and primary care providers—can facilitate timely referrals and integration of genetic services into standard care. Improved interdisciplinary coordination between oncologists, pathologists, and genetic counselors is crucial to streamline patient pathways.

- Dissemination of regionally adapted print and digital educational materials in multiple languages can help raise awareness among the general population, dispel myths, and encourage family-based cascade testing.

Together, these strategies can help overcome current limitations and ensure broader, equitable access to genetic risk assessment and personalized cancer prevention in India.

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Covid-19 pandemic information

2021-2024

[Taken from our previous annual reports]

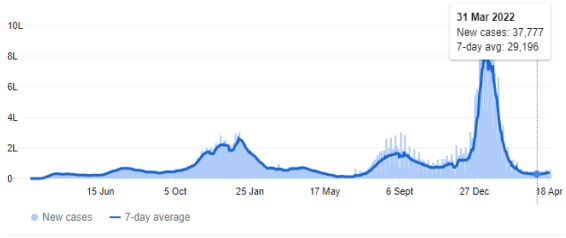
INFORMATION ON COVID-19 PANDEMIC [2021-2024] – taken from our previous reports

The Covid-19 saga | information in brief | April 2021 through March 2024

April 2021 – March 2022 [Also available in our 2021-22 Annual report]

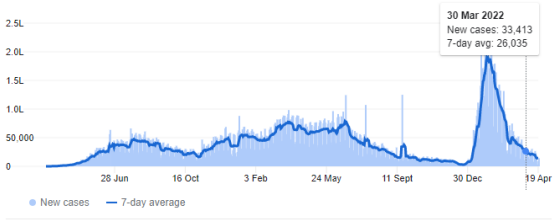
The constant in an inconstant and unsettled world : the coronavirus and its variants

Daily new Covid cases reported – The US, India, Brazil, France, Germany and The UK (Source - JHU-CSSE data – 2021-2022).



The US

India



Brazil

France

Germany

The UK

Please make sure to get your shots and the booster doses

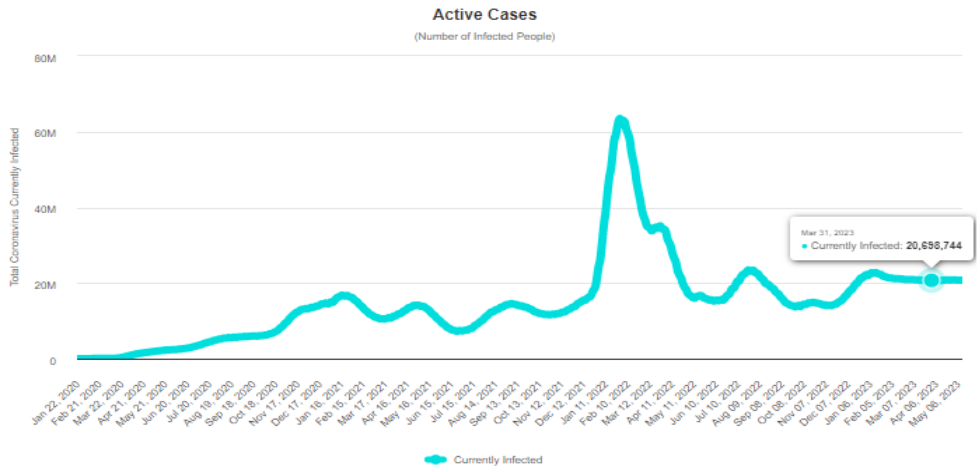
The Covid-19 saga | information in brief | April 2021 through March 2024 [Contd.]

April 2022 – March 2023 **:** [Also available in our 2022-23 Annual report]

Covid by the numbers [Source: JHU-CSSE data 2022-23: Active Covid cases (N - Number of infected people)]

The constant in an inconstant and unsettled world : the coronavirus and its variants

Country	**N [As of 1 April 2022]**	**N [As of 31 March 2023]**
USA	1, 561, 998	1, 075, 372
India	10, 767	15, 208
Brazil	575, 413	309, 263
France	2, 309, 616	143, 477
Germany	4, 575, 633	109, 003
The UK	2, 019, 961	44, 424
Japan	441, 767	11, 663, 096
S. Korea	6, 509, 596	175, 021
Italy	1, 306, 932	138, 599
Russia	608, 240	245, 783
Global cases :	34, 153, 126	20, 698,744



April 2023 – March 2024 **:** some updates

May 2023

WHO declared an end to Covid -19 as a Global Health Emergency

August 2023

Emergence of JN.1 – the latest Omiron variant – a descendant of BA.2.86

WHO classification : Variant of Interest (VOI)

The new variant caused a transient global concern around late 2023 through early 2024 with rise in Covid cases.

Reportedly, first detected in Luxembourg, it spread to several countries, including the United States, China, Europe and India. Health experts discerned the risk to the public to be low and that existing vaccines continued to offer protection that averted serious illness and hospitalization in majority of the cases. Most patients experienced mild upper respiratory symptoms, which typically improved within 4-5 days. Early studies suggested JN.1 possessed specific mutations that enhanced its transmissibility, allowing it to spread potentially faster than its predecessors

October 2023

Physiology/Medicine Nobel prize, 2023, was awarded for discovery of effective Covid-19 mRNA vaccines - "The laureates contributed to the unprecedented rate of vaccine development during one of the greatest threats to human health in modern times" – the Nobel prize committee.

Long Covid

Long Covid science, research and policy (2024)

https://pubmed.ncbi.nlm.nih.gov/39122965/

The knowns and unknowns of long Covid-19: from mechanisms to therapeutical approaches (2024)

https://pubmed.ncbi.nlm.nih.gov/38500880/

Mechanisms of long Covid and the path toward therapeutics (2024)

https://pubmed.ncbi.nlm.nih.gov/39326415/

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