

 **Acharya I, Rohatgi J, Sahu PK. Surgical success of 'W' shaped incision versus Tear trough incision in external dacryocystorhinostomy. Orbit. 2022;41(5):572-580.**


In a prospective study, 61 eyes of chronic dacryocystitis underwent external dacryocystorhinostomy randomized into group T (30 eyes) and group W (31 eyes). Intraoperative skin flap button-holing and reversible darkening of their apices were specific complications of group W. In the early postoperative period, lid edema and epiphora were significantly more in group T. Overall, the surgical success in terms of cosmetic, anatomical and functional outcomes in both groups were comparable.

 **Agrawal A, Jha T, Gogoi P, et al. Effect of convalescent plasma therapy on mortality in moderate-to-severely ill COVID-19 patients. Transfus Apher Sci. 2022;61(6):103455.**

This study analyzed the records of all COVID-19 patients who received plasma therapy over a period of 6 months in a dedicated COVID-19 hospital in Delhi. Of the 141 patients who received plasma therapy, 62% were discharged after treatment. Age > 60 years, severe COVID-19 infection and pre-existing renal disease were significantly associated with a fatal outcome. The admission-transfusion interval < 5 days was significantly correlated with greater mortality. Patient blood group, plasma antibody levels or donor hemoglobin levels were not associated with death.


 **Aggarwal S, Rajnish RK, Kumar P, Srivastava A, Rathor K, Haq RU. Comparison of outcomes of retrograde intramedullary nailing versus locking plate fixation in distal femur fractures: A systematic review and meta-analysis of 936 patients in 16 studies. J Orthop. 2022;36:36-48.**

Six randomized control trials, 2 prospective and 8 retrospective studies with 936 patients with 8 bilateral cases [467: retrograde intramedullary nails (RIMN) and 477: locking plates (LP)] were included. The analysis concluded that there was no statistically significant difference in terms of mean fracture union time, overall complications, implant-related complications, re-operation rates, and duration of surgeries, in both techniques in distal femur fractures. However, a better knee range of motion was seen in the LP method albeit with a greater non-union and infection rate compared to that with RIMN technique.


 **Agrawal T, Dewan P, Gomber S, Agarwal R, Sharma S, Kotru M. Optimum dose of oral folic acid supplementation in transfusion-dependent thalassemia: a randomized controlled trial. J Trop Pediatr. 2022;68(6):fmac087.**

A randomized study compared the effect of different doses of oral FA supplementation on the proportion of children with folate and plasma homocysteine (Hcys) excess in transfusion-dependent thalassemia (TDT). After an initial wash-off period of 8 weeks, the median serum folate levels were significantly lower and five children developed folate deficiency. 90 children were randomized to receive different FA doses (5 mg/day Vs 2.5 mg/day Vs 5 mg/week) over 9


months follow up. After 9 months, the median serum folate and Hcys levels and proportion of children with serum and RBC folate excess were comparable in the three groups. Hyperhomocysteinemia was seen in eight children. Routine FA supplementation is recommended in TDT, albeit 5 mg weekly FA may be adequate.

 **Ahmad S, Arora R, Aggarwal AN, Ul-Haq R, Khan K, Tandon A. Comparison between reliability of Schatzker's classification and CT based four quadrant classification for tibial plateau fractures. J Clin Orthop Trauma. 2022;32:101986.**


CT based four quadrant classification has been proposed to identify fractures of tibial plateau and aid their surgical treatment. Plain radiographs and CT scans of 35 patients of closed tibial plateau fractures were assessed by 5 orthopedic surgeons and classified by Schatzker's and four-quadrant classification. A similar observation was recorded after 2 months. Four-quadrant classification seemed more reliable in determining tibial fractures having a better agreement on interobserver and intraobserver variation.

 **Bhavya, Rajaram S, Gupta B, et al. PAX1 methylation status in cervical scrapes as novel diagnostic biomarker in CIN 2/3 and invasive squamous cell carcinoma. J Obstet Gynaecol India. 2022;72(6):522-528.**


A total of 200 screen positive women (VIA, VILI and Pap test) underwent colposcopy wherein cervical scrapes were taken and stored for DNA analysis and PAX 1 methylation status. Cervical biopsy was performed in women with Swede score ≥ 5 ($n = 98$). Cervical scrapes and biopsy were also obtained from 14 women with obvious cervical growth. PAX 1 methylation percentage was calculated from the DNA extracted from the cervical scrapes. The mean PAX1 methylation percentage in benign lesions, CIN 2/3 and invasive cancer was 9.58% ($\pm 2.37\%$), 18.21% ($\pm 2.67\%$) and 24.34% ($\pm 4.09\%$), respectively, with P-value < 0.001. PAX1 methylation can serve as a marker of high-grade and invasive cervical cancer.

 **Chandra J, Dewan P, Kumar P, et al. Diagnosis, treatment and prevention of nutritional anemia in children: Recommendations of the joint committee of Pediatric Hematology-Oncology Chapter and Pediatric and Adolescent Nutrition Society of the Indian Academy of Pediatrics. Indian Pediatr. 2022;59(10):782-801.**


These are the first evidence-based guidelines for the management of nutritional anemia in children. The authors recommend the use of WHO recommended cut-offs of hemoglobin to define anemia in children and adolescents. These guidelines provide an algorithmic approach for the management of iron deficiency anemia and anemia due to vitamin B12 or folic acid deficiency. Screening of infants for anemia at 9 months' age during the routine immunization visit is recommended along with continued iron folic acid supplementation as per the Anemia Mukta Bharat Program.

 **Gangwani N, Singh S, Khaliq F. Trigger films to teach core competencies of ethics and professionalism to first-year medical and nursing students. *Adv Physiol Educ.* 2022;46(3):491–497.**


The study evaluated the role of trigger films, 3-10 minute-long movie clips, as a tool to impart training in professionalism and ethics to under-graduate medical and nursing students. A 2-hour module incorporating an introductory powerpoint presentation and four trigger films based on the four ethical principles of beneficence, non-maleficence, autonomy, and justice, was developed and piloted in the foundation course for the new cohort of students. The students perceived trigger films as an effective and innovative teaching-learning tool.

 **Goel A, Raizada A, Agrawal A, et al. Correlates of in-hospital COVID-19 deaths: A competing risks survival time analysis of retrospective mortality data. *Disaster Med Public Health Prep.* 2022;16(5):1889–1896.**

Data of 1147 COVID-19 patients with a mean age of 50 (± 16.5) years treated at a dedicated COVID hospital in North India, with moderate and severe illness over an 8-week-duration were reviewed. 885 (77.2%) patients were confirmed positive for COVID-19 on reverse transcriptase polymerase chain reaction (RT-PCR). Of 1147 patients, 312 (27.2%) died in hospital and of these 219 had tested positive for COVID-19 on RTPCR. Amongst the COVID-19 positive cases, one-third had died within the first 72 hours of hospitalization; most of them had associated comorbidities. The median time from the onset of symptoms to death was 11 days. After adjusting for sex and COVID-19 test status, advancing age was found to be significantly associated with death.


 **Grover C, Kharghoria G Nail Lichen Planus Severity Index (NALSI): A Novel Severity Score for Nail Lichen Planus. *Indian Dermatol Online J.* 2022;13(5):680–681.**

The authors proposed a score for nail lichen planus to aid evaluation of disease severity and monitor the response to treatment. Each nail is scored based on changes seen in nail matrix, nail bed, and nail fold and presence of irreversible nail changes like dorsal pterygium, atrophy, onychia, or disappearing nail bed.


 **Gupta VP, Beri N, Rohatgi J. Comparative evaluation of outcomes of novel approach of subconjunctival Mitomycin C (MMC) injection at the end of trabeculectomy versus intraTenon injection of MMC prior to the initial conjunctival incision - A pilot study. *Indian J Ophthalmol.* 2022;70(12):4194–4200.**

This pilot study included 40 eyes of 40 patients with uncontrolled glaucoma. Patients below 18 years and failed trabeculectomy were excluded. Patients were randomized to receive subconjunctival mitomycin C injection in the superonasal quadrant at the end of standard trabeculectomy (group A, n=20) or intraTenon mitomycin C injection before the initial conjunctival incision (group B, n=20). Complete success (intraocular pressure < 21 mm Hg without antiglaucoma drugs) was observed in 95% and 75% participants in groups A and B, respectively, 19 months after surgery. Avascular microcystic blebs (70% of group A and 45% of group B) were more common than avascular white blebs (15% in group A and 35% in


group B). Both groups did not report any intra-operative complications, post-operative wound leak, hypotony, choroidal detachment, or endophthalmitis. Subconjunctival mitomycin C during trabeculectomy is a useful modality with greater success rate compared to the intra Tenon mitomycin C.

 **Jain A, Aggarwal R, Gupta N, et al. Reduced fetal urine production rate-An early marker of fetal inflammatory response syndrome in preterm premature rupture of membranes: Prospective cohort study. *Int J Gynaecol Obstet.* 2022;159(2):444–450.**


This prospective cohort study of 70 pregnant women with preterm premature rupture of membranes at 28-34 weeks of pregnancy aimed to find the association between fetal urine production rate (FUPR) and fetal inflammatory response syndrome (FIRS). FUPR was calculated by weekly fetal bladder volume measurements on ultrasound until delivery. After delivery, cord blood interleukin-6 levels, placental tissue histopathology and neonatal outcomes were recorded. Mean FUPR was significantly reduced in neonates with evidence of FIRS. Reduced FUPR can be used as an early predictor of adverse neonatal outcomes.

 **Jindal R, Grover C, Sarkar R, Gupta LK. IADVL Academy position statement on emerging dermatoses in India: Monkeypox. *Indian Dermatol Online J.* 2022;13(5):559–569.**

Through the document, the Indian Association of Dermatologists, Venereologists, and Leprologists aims to sensitize dermatologists to enable prompt recognition and containment of monkeypox which was declared to be a “Public Health Emergency of International Concern” by the World Health Organization in mid-2022.


 **Kaushik JS, Ramachandran P, Kukreja S, Gupta P, Singh T. Delivering electives the clerkship way: consolidating the student doctor method of training. *Indian Pediatr.* 2022;59(9):710–715.**

The authors propose a model to deliver the electives during medical graduate training in India using the clerkship method. This model allows medical students to interact with real patients as a part of a treating team under the guidance of an experienced faculty and allows them to integrate their basic science knowledge with clinical reasoning. Elective posting during under-graduate medical training is a feasible and practical teaching-learning tool.


 **Khairwa A, Kotru M, Dewan P, Narang S. Morphological markers of chromosomal instability in bone marrow aspiration and trephine biopsy of acute leukemia and myelodysplastic syndrome. *Environ Mol Mutagen.* 2022;63(8–9):418–422.**

Seven morphological markers of chromosomal instability (CI) viz., chromatin bridges, multipolar mitosis (MPM), nuclear budding, micronuclei (MN), nuclear heterogeneity (NH), laggards, and chromatin strings in bone marrow aspirate and biopsy, were studied in 37 patients diagnosed with acute leukemia or myelodysplastic syndrome (MDS). All CI markers except laggards were significantly increased in B-acute lymphoblastic leukemia (B-ALL), acute myeloid leukemia (AML) and MDS. The MN, MPM, laggard and NH markers were significantly increased in


patients who met a fatal outcome. Morphological markers of CI are valuable diagnostic and prognostic aids in hematological malignancies.

 **Madan S, Yadav R, Rohatgi J, et al. Demographic and clinical profile of patients presenting with COVID-19-associated rhino-orbito-cerebral mucormycosis at a tertiary care center. *Ann Natl Acad Med Sci.* 2022;58(4):210–219.**


This descriptive study determined the demographic and clinical profile including the risk factors in 117 patients admitted with COVID-19-associated rhino-orbito-cerebral mucormycosis. Diabetes mellitus was noted in 86.2% patients, oxygen supplementation for COVID-19 was received for about 11 days by 34.3% patients. 60% patients were treated with corticosteroids and intravenous amphotericin B was administered to all. External sinonasal debridement was performed in 78.9%, retrobulbar amphotericin B injection administered in 47.9%, and orbital exenteration was performed in 14.5%.

 **Madhu SV, Mishra BK, Mannar V, Aslam M, Banerjee B, Agrawal V. TCF7L2 gene associated postprandial triglyceride dysmetabolism- a novel mechanism for diabetes risk among Asian Indians. *Front Endocrinol (Lausanne).* 2022;13:973718.**

The increase in the risk of type 2 diabetes mellitus (T2DM) in individuals with transcription factor 7 like 2 (TCF7L2) gene is explained by its effect on insulin secretion. Post-prandial lipid responses to a standardized fat challenge test were performed in 620 Asian Indian participants aged 20–60 years (310 with normal glucose tolerance, 155 with prediabetes, 155 with T2DM) and compared between the risk and wild genotypes of the rs7903146 TCF7L2 gene. In 30 participants, adipocyte TCF7L2 gene expression was also performed. Significant upregulation of TCF7L2 gene expression in visceral adipose tissue that correlates with post-prandial hypertriglyceridemia and glycemia was seen in Asian Indians with glucose intolerance which contributes to their increased diabetes risk.


 **Madhu SV, Aslam M, Mishra BK, Gupta A, Jhamb R. Association of 25 (OH) vitamin D and leptin in individuals with insulin resistance. *Indian J Endocrinol Metab.* 2022;26(5):435–438.**

The study assessed association between hypovitaminosis D and hyperleptinemia. 92 individuals; 46 each with insulin resistance (homeostasis model assessment of insulin resistance [HOMA-IR] ≥ 2.0) and without insulin resistance (HOMA-IR < 2.0), were evaluated for serum 25(OH) vitamin D, leptin, anthropometry, and biochemical parameters. Higher circulating leptin levels and lower 25(OH) vitamin D levels were observed in individuals with insulin resistance.


 **Shah HK, Banerjee BD, Thakur GK, Guleria K. Organochlorine pesticides induce epithelial as well as inflammatory mediators following exposure to human ovarian surface epithelial cells: an in vitro study. *J Biochem Mol Toxicol.* 2022;36(11):e23191.**

The study investigated the impact of dichlorodiphenyldichloroethylene (DDE), endosulfan, and heptachlor exposure on


epithelial cadherin (E-cadherin) and proinflammatory mediators in human ovary surface epithelial (HOSE) cells. Exposure to DDE, endosulfan, and heptachlor resulted in epithelial differentiation accompanied by upregulation of E-cadherin expression and overexpression of proinflammatory cytokines (TNF α , IL-1 β , and IL-6) in HOSE cells creates a chronic inflammatory microenvironment that may promote the neoplastic transformation.

 **Sihag P, Tandon A, Pal R, Bhatt S, Sinha A, Sumbul M. Sonography in male infertility: a useful yet underutilized diagnostic tool. *J Ultrasound.* 2022;25(3):675–685.**

Comprehensive sonographic examination including scrotal sonography, testicular doppler and transrectal ultrasound was used to differentiate between obstructive (OG) and non-obstructive (NOG) causes of azoospermia in 30 infertile men with azoospermia and 30 healthy males with normospermia. Ectasia of rete testis/epididymal tubules, altered epididymal echogenicity, dilated terminal vas deferens were significantly more common in OG while inhomogeneous testicular echo-texture and reduced testicular vascularity were more common in NOG. Testicular volume and epididymal head size were significantly higher in OG while resistive index of intra-testicular vessels was higher in NOG. The authors suggest comprehensive sonographic evaluation in the routine diagnostic evaluation of men with azoospermia.

 **Singal A, Bisherwal K, Agrawal S, Bhat S, Diwakar P. Clinico-epidemiological profile and management outcome of subungual digital glomus tumor-Indian experience. *Dermatol Ther.* 2022;35(10):e15745.**

The study analyzed the demographic, clinical, onychoscopic, radiological features and management outcome of 16 subungual glomus tumors in 15 patients. Glomus tumors had a female preponderance (11/15) with thumb being the commonest site. Intractable pain was observed in all patients; nail discoloration was seen in 68.8% (11/16) lesions and nail plate deformity in 37.5% (6/16) lesions. Pink glow and linear vascular structures were seen on onychoscopy. Doppler sonography and/or magnetic resonance imaging confirmed the diagnosis of glomus tumor in all the lesions. Trans-ungual surgical excision was done in all without recurrence.

 **Thuluva S, Paradkar V, Gunneri S, et al. Safety, tolerability and immunogenicity of Biological E's CORBEVAX™ vaccine in children and adolescents: A prospective, randomised, double-blind, placebo controlled, phase-2/3 study. *Vaccine.* 2022;40(49):7130–7140.**

The safety, reactogenicity, tolerability and immunogenicity of CORBEVAX™ vaccine was tested in children and adolescents in a phase-2/3 prospective, randomised, double-blind, placebo-controlled study. The study showed that CORBEVAX™ vaccine is highly immunogenic and can be safely administered to pediatric population as young as 5 years old. The majority of reported adverse events were mild in nature.

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