Jaslok Hospital & Research Centre, Mumbai

Research eBulletin


Department of Medical Research
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Editorial

The Importance of Air, Light and Rest in Healing

Prior to the era of modern medicine, good ventilation, adequate exposure to sunlight and appropriate bed rest constituted the cardinal aspects of recovery from illness. The great medical institutions were designed keeping these principles at the forefront.

The advent of the antibiotic era reduced the significance of air, light and rest in recovery from illnesses. The real estate crunch in urban areas further contributed to a reduction of the emphasis on ventilation and light. The pressures of modern life and the role of occupational performance in dictating the progress of professional life has led to considerably diminished bed rest. Patients want to recover rapidly, preferably with antibiotics and get back to work at the earliest. The pressures of the marketplace in catering to these demands, has led to physicians abandoning the principles of adequate rest in conditions with proper ventilation and light.

Adequate light, preferably that of the morning sun, has been linked to decreased hospital stay, improved sleep and circadian system, enhanced mood and perception, reduced agitation among dementia patients, easing pain and improved performance of complex visual tasks.

Air quality especially in major cities is highly compromised. Increased use of air conditioners magnifies the problem - increasingly people spend time indoors in poor ventilated rooms, preventing the expulsion of the volatile organic chemicals and particulates, molds caused due to increased moisture content and toxins in the air. This increases risk for asthma, headaches, cardiac problems and adverse effect on brain function. Hospital borne infections are often spread through central air conditioning.

It has been suggested that for each day of illness, the body takes three days to recover back to baseline. However, today patients resume work and responsibilities when they are out of danger, not necessarily when they are well. Patients recover faster with compromised immunity at the individual as well as the herd level. Antibiotic resistance is rampant leading to individual confinement to hospital beds with escalating medical costs as opposed to voluntary bed rest in conditions conducive to healing.

In India, with the large volumes of patients, physicians have very little time with each patient. Often, antibiotic prescriptions to manage the acute infection are followed by the customary "make sure you get adequate rest!" Taking out those few extra moments to explain the significance of convalescence will ensure complete recovery and fewer relapses.

Rajesh M. Parikh, M.D., D.P.M., D.N.B.
Director, Medical Research
Research News

Dr. M. Pawan Reddy was selected to present the paper “An 11 year old girl with intestinal obstruction, ovarian mass and raised serum creatinine” in the Competitive Grand Rounds 2017, organised by the Indian Journal of Pediatrics on 10th September 2017 at New Delhi.

Abstracts

Downregulation of genes related to immune and inflammatory response in IVF implantation failure cases under controlled ovarian stimulation
Pathare AD, Zaveri K, Hinduja I

PROBLEM: Implantation failure (IF) even after the good-quality embryo transfer (ET) is main obstacle in in vitro fertilization (IVF). We aim to study the genomics of endometrial receptivity in IF patients under controlled ovarian stimulation (COS) during which ET is generally practised in IVF.

METHOD OF STUDY: Endometrial gene expression profiling in IF patients (n=10) and oocyte donors (n=8) were compared during window of implantation under COS by microarray. Enrichment analysis of microarray data was performed to determine dysregulated pathways. Microarray results were validated by real-time PCR. Localization of genes related to immune response (progestagen-associated endometrial protein (PAEP), leukaemia inhibitory factor (LIF), interleukin-6 signal transducer (IL6ST) was detected by immunohistochemistry.

RESULTS: The gene ontology, pathway analysis and enrichment mapping revealed significant downregulation in activation and regulation of immune and inflammation response in IF patients under COS. The lower expression of PAEP, LIF and IL6ST in cases compared to controls by real time and immunohistochemistry suggests the functional importance of these genes.

CONCLUSION: Importance of immune and inflammatory response in endometrial receptivity adds on to the current knowledge of gene expression profile in IF under COS. The panel of genes involved in these pathways would be useful in determining further line of treatment for IF during IVF.

Generalized eruptive syringoma
Avhad G, Ghuge P, Jerajani HR

Eruptive syringoma is a very rare variant of syringoma. It is a benign adnexal tumor of the intraepidermal portion of eccrine sweat ducts. Here we report a 32-year-old female presented with classical asymptomatic eruptive syringomas involving her face and extremities.
A study of antiretroviral resistance patterns in treatment experienced and naïve human immunodeficiency virus infected patients
Harjani R, Malkani R

BACKGROUND: About 10% of the patients had surveillance drug-related mutations for nonnucleoside reverse transcriptase inhibitors (NNRTIs) and protease inhibitors (PIs) in an Indian study. It was also reported that resistance was maximum for nucleoside reverse transcriptase inhibitors (NRTIs) and minimum for PIs.

METHODS: The present study was a cross-sectional assessment of 21 human immunodeficiency virus (HIV)-infected individuals attending a HIV care center in a tertiary care center in Mumbai, Maharashtra, India. All HIV-infected individuals included in the present analysis were tested for CD4 count, viral load, and resistance to antiretrovirals (ARVs).

RESULTS: A total of 13 male and 8 female were included in the present analysis. Of these, 18 were treatment naive and three were treatment experienced patients. In treatment-naive patients, the proportion of high-level resistance (HLR) was 2% for NRTIs, 5% for PIs, and 11% for NNRTIs. In treatment-naive patients, high susceptibility was observed for darunavir (89%) followed by lopinavir (72%) and fosamprenavir (67%) among PIs. Similarly, susceptibility was high for NRTIs lamivudine (94%), emtricitabine (94%), and tenofovir (89%). However, we found HLR for nevirapine (39%) even in treatment-naive patients.

CONCLUSIONS: The proportion of HLR was relatively low for PIs and NRTIs, compared with NNRTIs in treatment-naive patients. We also reported a high correlation in resistance patterns among drugs belonging to the same group. Thus, it may be useful to conduct ARV resistance even in newly infected HIV patients and those receiving medications for the first time.

Metastatic Crohn's disease
Amarapurkar DN, Sonavane A, Amarapurkar AD

Metastatic cutaneous involvement is a rare extraintestinal manifestation of Crohn's disease. Presence of cutaneous noncaseating granulomas that are anatomically noncontiguous in location with a fistula or the gastrointestinal tract is a diagnostic hallmark. We present a case of inflammatory bowel disease initially diagnosed as ulcerative colitis, but later manifesting as intra-abdominal abscesses and ulcerated cutaneous lesions that on biopsy proved to be metastatic Crohn's disease. The patient promptly responded to corticosteroid therapy.
Impact of different controlled ovarian stimulation protocols on the physical and psychological burdens in women undergoing in vitro fertilization/intra cytoplasmic sperm injection
Mamata D, Ray SK, Pratap K, Firuza P, Birla AR, Manish B

CONTEXT: Infertility treatment involves a considerable amount of physical and psychological burden which may impact the outcome.

AIM: The objective was to understand the amount of physical and psychological burden in women undergoing their first in vitro fertilization (IVF)/intra cytoplasmic sperm injection (ICSI) cycles.

SETTING AND DESIGN: Multi-center, prospective, parallel, observational study.

MATERIALS AND METHODS: The study was conducted across 12 IVF centers in India. A total of 692 women undergoing controlled ovarian stimulation as a part of the first cycle IVF/ICSI completed the trial. Women were recruited in 2 groups based on type of treatment (Group A - gonadotropin-releasing hormone [GnRH] antagonist; Group B - GnRH agonist) and were asked to fill questionnaires during the 2 treatment visits.

RESULTS: The mean changes between Visit 1 (baseline) and Visit 2 in anxiety and depression (Hospital Anxiety and Depression Scale) scores in Group A for anxiety and depression were -0.5 (3.67), -0.1 (3.57) respectively and for Group B were -0.4 (3.68), 0.1 (3.67) respectively, which was not statistically significant. In Group A, the mean (±standard deviation [SD]) Hopkins Symptom Check List (HSCL) score was 17.9 (±5.17) in visit 1 and 19.1 (±5.45) Visit 2. The change between visits was 1.1 (P < 0.0001) with higher score reflecting higher somatic distress symptoms. In Group B, the mean (±SD) HSCL score was 18.2 (±5.19) in Visit 1 and 18.8 (±5.23) in visit 2. The change between visits was 0.6 (P < 0.0014). The difference of the mean change in physical burden between Group A and Group B was not statistically significant.

CONCLUSION: A significant impact in both treatment protocols with respect to the physical burden was found between Visit 1 and Visit 2 but no difference in physical or psychological burden between the two treatment groups was observed.

Ascariasis imaging: pictorial essay

Ascariasis is not widespread in Europe, and the knowledge on how to diagnose and treat the disease is limited to some specialists. On the other hand, clinicians are facing an increasing number of immigrants from high-prevalence countries and are, therefore, challenged to update in this field of infectious diseases. Here we present current knowledge on this infection in 2 parts. The first part discusses clinical features and hot topics in ascariasis, and the second part presents imaging features of ascariasis as a pictorial essay.
Consensus statement on management of post-prandial hyperglycemia in clinical practice in India

Postprandial hyperglycemia (PPHG) is a detrimental factor in the evolution of diabetes related complications. Numerous studies have established the role of PPHG in development of atherosclerosis and associated cardiovascular conditions. It is seen that management of PPHG can be more troublesome than fasting plasma glucose (FPG). Currently, there are various strategies both monitoring as well as therapeutic to control PPHG but there is no uniformity in practicing these strategies. In the absence of any standard guidelines, widespread variations in the management of PPHG are observed among physicians and diabetologists. The objective of this document is to set forth uniform guidelines to manage PPHG. This will not only result in optimal management and prevention of long term complications of diabetes but also better co-ordination and collaboration among the care providers. Moreover, an Indian perspective that can take into consideration the issues relevant to Indian patient pool will be effective. An expert committee comprising of prominent physicians and researchers associated with diabetes care provided their inputs to provide a basic platform for the formulations of guidelines. Their inputs were supplemented by extensive literature search to collect the relevant evidences. An initial draft was prepared which was reviewed by the core committee. Inputs from other experts were also sought and an initial guideline version was formulated that was presented in a conference, discussed and debated among experts. The guidelines on PPHG were then finalized and published.

Cultural aspects of anxiety disorders in India
Khambaty M, Parikh RM

Cultural factors have influenced the presentation, diagnoses, and treatment of anxiety disorders in India for several centuries. This review covers the antecedents, prevalence, phenomenology and treatment modalities of anxiety disorders in the Indian cultural context. It covers the history of the depiction of anxiety in India and the concept of culture in the classification of anxiety disorders and examines the cultural factors influencing anxiety disorders in India. We review the prevalence and phenomenology of various disorders, such as generalized anxiety disorder, panic disorder, social anxiety and phobic disorder, as well as culture-specific syndromes such as dhat and koro in India. Finally, the review examines the wide range of therapeutic modalities practiced in India, such as faith healing, psychotherapy, ayurveda, psychopharmacology, Unani medicine, homeopathy, yoga, meditation, and mindfulness. We conclude by emphasizing the significance of cultural factors in making relevant diagnoses and offering effective and holistic treatments to individuals with anxiety disorders.
Legends of Jaslok Hospital

Dr. Kuldip Singh Goleria

On the morning of 19th June 2017, a brilliant star in the Galaxy of Plastic Surgeons rested his scalpel for the final time. Dr. Kuldip Singh Goleria was a true legend not just of our hospital but of the entire medical fraternity. He was a combination of brilliance, humility and medical ethics.

Dr. Goleria was born in 1931 in Lucknow. After completing his MBBS from T.N. Topiwala Medical College, Mumbai, he developed an interest in plastic surgery which was then in its nascent stage. To pursue that, he went to UK to train under the guidance of the father of Plastic Surgery, Dr Harold Gillies. After completing FRCS (Edin.) and DORL (London) he returned to Mumbai and joined KEM Hospital to eventually become the Head of the Department in 1969. He nurtured the department for years, adding several feathers to its cap - among them, it being the first department in the country to start craniofacial surgery and the first to start Micro surgery.

He was a man of wisdom and common sense, having solutions for the most complex problems in plastic surgery. When he started his surgery nothing else would matter to him, least of all finances.

He started Camp Dharamshala with his wife Dr Pushpa Goleria in Dharamshala. He and his team went there for 22 years on the first Sunday of April and did about 3500 procedures in that period. He was honoured by His Holiness Dalai Lama for his work and dedication. He was selfless as the administrator for the Ramkrishna Mission Hospital and the Shushrusha Hospital in Mumbai and established them as centres of excellence. He was founder trustee of the Association of Plastic Surgeons of India (APSI), being an integral part of the committee, compiling its bylaws.

After retiring from KEM hospital, he joined the Jaslok Hospital and Research Centre in 1989 and established the first craniofacial centre in a private hospital in India. His love for teaching shaped the careers of many students. He not only taught them the subject, but trained them to take on life. He was very proud of them when they achieved greater heights. We will miss his warmth, love and guidance.

Editorial Board
Editorial Assistant: Ms. Maherra Khambaty.