

Editorial

It is my pleasure to write an editorial for this issue. A total of 11 articles are presented in this issue, which contains a special section of 4 reviews pertaining to recent advances in magnetic resonance (MR) and an article on Celiac disease (CeD). In addition, it has 3 original research papers, two case reports and an invited commentary.

The first article is a commentary on the early detection and management of hearing loss in neonates, the present Indian health scenario by Anjali Lepcha. The next three are original research articles and the first paper in this list is on the effect of Haemozoin on platelets in malaria by Sushma et al. The study showed that the presence of Haemozoin significantly decreased the platelet counts and indicated that phagocytosis of Haemozoin pigment by platelets may contribute to the thrombocytopenia seen in malaria.

Karthikeyan, et al. next reports the study of EEG changes in dementia patients. Their study showed definite EEG abnormality in majority of patients. The last of the original article was also by Karthikeyan et al. In this article, the authors discuss the vestibular evoked myogenic potentials in migraine patients.

Since its discovery in 1946, nuclear magnetic resonance (NMR) technique has played an important role in many areas of physics, chemistry, biology and medicine. NMR initially used for chemical structure elucidation, later became an indispensable diagnostic tool in medicine. In fact, one of the variants of NMR methodology is Magnetic Resonance Imaging (MRI), which revolutionized the field of medicine for diagnosis of cancer and various other diseases. MRI is based on the same physical principle of NMR.

The next five articles of this issue form a 'special section' that contain reviews by experts that is devoted to highlighting the recent advances in NMR and MRI in clinical research and on the current status of Celiac disease (CeD) in India. The first in this section is a review by Sridhar et. al. on the role of magnetic resonance image-guided prostate biopsy (MRGB), a rapidly evolving method for prostate cancer detection that is expected to reduce the unnecessary biopsies carried out by conventional TRUS biopsy procedure. The review deals with the current perspectives of MRGB in terms of detection rate and in comparison, to various techniques, current controversies in obtaining the cores, management of previous negative MRGB and recent advancements in the technique.

An overview of functional MRI (fMRI) is presented next by Chaudhary et. al. fMRI, a sub-domain of MRI, evaluates various brain tasks in a non-invasive manner and is widely used to study cognitive brain functions. This article describes the basics of fMRI and the methodology adopted to study various brain functions. The technique has deciphered roles of several brain regions corresponding to specific tasks and reviews some of the applications of fMRI.

The two reviews following fMRI article is on the utility of NMR spectroscopy in various diseases that affect humans. The first is by Tyagi et al. on NMR based metabolomics approach in clinics. In this review, the authors focus on the clinical applications

of NMR based metabolomics in various diseases such as cancer, diabetes, coronary artery diseases and celiac disease. The NMR based experimental approach and the various pre- and post- processing steps including predictive modeling, model verification and pathway analysis have also been discussed.

The second review in this category is by Dwivedi et al. and is on the role of NMR spectroscopy as a tool for the characterization of human gallstones diseases. Gallstone diseases affects a large number the population and the pathogenesis of gallstone is complicated. NMR is a tool that is useful for the analysis of the composition of gallstones of different etiology. In this review article the authors describe the application and utilization of the application of NMR spectroscopy for unveiling the insight associated with gallbladder diseases.

Celiac disease (CeD) is a chronic, systemic autoimmune disorder characterized by immune mediated enteropathy in genetically susceptible individuals induced by gluten proteins present in wheat, barley, and rye. Banyal et al. presents the current status with respect to the prevalence of CeD in India. Despite the belief that CeD is rare in India, more cases are being reported now and this review describes the specific and sensitive serologic tests available for diagnosis and the need to use them more widely. The treatment of CeD remains a lifelong Gluten Free Diet, which results in remission in most individuals.

Following these reviews of the special section on NMR, MRI and CeD from experts who have contributed immensely in their respective areas, the issue contains two case reports, as well. The first case report is on a case of choroid plexus papilloma in a fetus of gestational age 20 weeks by Femela et al. The second case report is on giving anesthesia in extremely low birth weight and preterm neonate by Daisy et al.

It is sincerely hoped that this issue will serve as a source material for the readers of this journal to know the current status and the future directions and the role MR including NMR metabolomics and CeD. The completion and the success of a special section for this issue depend on the quality of reviews from experts who share their knowledge and experience and I am grateful to all of them. Thanks to all the reviewers for sparing their precious time in refereeing these articles. Finally, it is my pleasure to thank the Vice-Chancellor Prof. T. Balasubramian and the Editor-in-Chief of this journal for giving me an opportunity to edit this issue. Special thanks to Dr. T. Puvithra for her help and support.



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