

## Preface

# Advances in Neuroimaging of the Fetus and Newborn



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*Editors*

The prenatal and infancy periods are critical to the development of the child. Any insult during these stages of life may lead to a host of congenital malformations. Congenital brain malformations may result from inherited genetic defects, spontaneous mutations within the embryo's genes, or damage to the fetus caused by the mother's exposure to toxins, infection, trauma, or drug use. It is challenging for clinicians to suspect or diagnose these malformations or abnormalities clinically. Non-radiation imaging techniques, such as ultrasound and MRI, play a vital role in diagnosing and characterizing the severity of these conditions.

This *Clinics in Perinatology* issue focuses on advances in neuroimaging of the fetus and newborn. It is curated to expose the neonatology community to clinically relevant updates in diagnostic imaging. This issue has a total of 12 articles and is balanced with conventional and high-end modalities in diagnosis and characterization of these congenital anomalies and abnormalities encountered during the prenatal and infancy stages. The first article introduces the fetal MRI by focusing on techniques and neuroanatomy. The next three articles provide a practical approach to congenital malformation imaging of the brain and spine. The rest of the issue spans perinatal conditions, such as hypoxic ischemic injury and infections to postnatally recognized malformations and metabolic disorders. In addition, we present a microcephalic and macrocephalic imaging approach, a clinically relevant topic. The last article describes genetic and imaging approaches to congenital craniofacial anomalies and syndromes.

We thank all the authors for their excellent contributions that make this issue an outstanding and comprehensive review on neuroimaging of the fetus and newborn. We would like to thank the Consulting Editor, Dr Lucky Jain, and the Elsevier staff

for giving us an opportunity to guest edit this issue and present this topic to a wider audience. Finally, we thank our families for their love and support. Happy reading!

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