

Preface



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Guest Editor

MR imaging has become a mainstay in the evaluation of pediatric musculoskeletal disorders. In addition to all the well-known advantages MR imaging offers to musculoskeletal imaging in the adult, MR imaging offers special advantages to children. First, MR imaging is superior in visualizing the cartilaginous aspects of the growing skeleton and in imaging the bone marrow. Second, and very importantly, it provides detailed imaging without radiation exposure. Relatively minor disadvantages to pediatric MR imaging include the need for sedation in younger, uncooperative patients and some technical limitations related to the small size of the patient.

It is important to remember that children are not small adults. Before one can successfully image children, one must understand the anatomy, physiology, and pathophysiology of the immature and growing skeleton. Unique musculoskeletal problems encountered within the pediatric population include imaging of congenital anomalies, tumors, and tumor-like conditions different than those encountered in the adult population; infections and inflammatory processes unique to the pediatric

population; and traumatic lesions unlike those seen in the adult.

In this issue, the authors provide excellent reviews of important topics in musculoskeletal imaging in children and offer technical suggestions to optimize imaging in the pediatric patient. The issue begins with MR imaging of normal and abnormal marrow in children and normal and abnormal appearances of cartilage in the growing skeleton. Reviews of pediatric arthritis, infection and inflammatory disorders, tumors and tumor-like conditions of the bone and soft tissues, and trauma are provided. Then, uniquely pediatric issues of the hip, knee, ankle, foot, and upper extremities are discussed.

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