

MR enterography in pediatric inflammatory bowel disease

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Magnetic resonance (MR) enterography is an increasingly important pediatric imaging modality that is most often used to evaluate pediatric inflammatory bowel disease (IBD), while sparing children and adolescents from potential risks of ionizing radiation exposure. MR enterography allows for evaluation of the bowel wall, adjacent mesentery and soft tissues, as well as a variety of extra-intestinal abdominopelvic IBD manifestations. While MR enterography can be used to initially confirm the diagnosis of IBD, particularly small bowel Crohn disease, it has also proven useful in assessing the degree inflammatory activity over time, serving as a radiologic biomarker for response to medical therapy, and identifying a variety of disease-related complications, including strictures, fistulae, and abscesses. The purpose of this lecture is to provide radiologists with an approach for MR enterography review and interpretation in children and adolescents with known or suspected of having IBD and to illustrate typical imaging findings.

Keywords : Pediatric, Inflammatory bowel disease, MR enterography

Pediatric application of MR elastography

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Liver diseases remain a common cause of morbidity and mortality among both adults and children across the world including nonalcoholic fatty liver disease. The end point of chronic liver disease is liver fibrosis, which is caused by various causes. And early diagnosis and staging of liver fibrosis are important factors contributing to a better outcome.

There are several quantitative MRI-based biomarkers associated with liver fibrosis including liver MR elastography and spleen MR elastography. In this lecture, we will learn the process of MR elastography including special preparation on pediatric patients. We will also discuss the technical success rates and associated factors to perform this technique in children, the clinical utility and diagnostic performance, and limitations.

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