TITLE

Current Techniques and New Perspective Research of MR Enterography in Pediatric Crohn Disease

All authors declare that there aren’ t any conflict of interest.

RUNNING TITLE

MR Enterography in Pediatric Crohn Disease

INSTITUTION

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AUTHOR CONTRIBUTIONS: Masselli G designed the study and wrote the manuscript; Mastroiacovo I helped to write the manuscript; De Marco E, Francione G, Casciani E, Polettini E and Gualdi GF provided the collection of part of the material; all the authors were also involved in editing the manuscript

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ABSTRACT

Crohn disease affects more than 500,000 individuals in the United States, and about 25% of cases are diagnosed during the pediatric period.

Imaging of the bowel has undergone dramatic changes in the past two decades.

While endoscopy with biopsy is generally considered the diagnostic reference standard, this combination evaluates only the mucosa; it does not assess inflammation or fibrosis within the submucosa or deeper tissues.

Currently, computed tomography enterography (CTE) and magnetic resonance enterography (MRE) are the only imaging modalities that can visualize submucosal tissues throughout the small bowel. CT generally is highly utilized, but there is growing concern over ionizing radiation and cancer risk; it is a very important aspect to keep in consideration in pediatric patients. In contrast to CTE, MRE does not expose patients to ionizing radiation and may be used to detect detailed morphologic information and functional data of bowel disease, to monitor the effects of medical therapy more accurately, to detect residual active disease even in patients showing apparent clinical resolution and to guide treatment more accurately.

KEY WORD: MRI, Imaging, Pediatric, Enterography, Crohn

CORE TIP

MR enterography is an effective imaging modality to diagnosis, evaluating and follow-up of CD in pediatric patient and novel MRI application, such as motility studies, spectroscopy, DWI, molecular and hybrid imaging (PET-MRI)are extremely interesting and might contribute to diagnosis and managment of CD.

COVER LETTER

Dear Editor,

Please find our submission “ Current Techniques and New Perspective Research of MR Enterography in Pediatric Crohn Disease ” for publication as Review on World Journal of Radiology.

Number ID: 00200516

Thanks a lot for your invitation and if there are any questions please do not hesitate to contact me.

 Best Regards,

 Gabriele Masselli, MD

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