

MR Enterography Findings in Pediatric and Adult Patients with Crohn's Disease

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Abstract : Crohn's disease is one of chronic inflammatory bowel diseases. It is increasing in prevalence worldwide, especially with young people. The disease usually occurs in the second to the fourth decade of life. Traditionally is diagnosed by clinical indicates, endoscopic, and histological findings. Magnetic Resonance Enterography (MRE) can demonstrate mural and extramural inflammatory signs and complications, which make it a valuable diagnostic modality. The study included 76 adults and 36 children diagnosed with Crohn's disease. Each patient underwent MRE with intravenous administration of a contrast agent. All the studies were performed using Siemens Aera 1.5T scanner according to a local study protocol. Whenever applicable, MR Enterography findings were verified with endoscopy. Forty adults and all 36 children had an active phase of Crohn's disease; five adults had a chronic phase of the disease; one adult had both chronic and active inflammatory features. Thirty adults have no signs of pathology. In both adult and pediatric groups the most commonly observed manifestation of active disease was thickened edematous ileum wall (26 adults and 36 children). Adults had Bauhin's valve edema in 58% cases (n=23) and mesenteric changes in 34% cases (n=9). To compare, 32 children had Bauhin's valve edema (89%) and, in 23 cases, was found inflammatory infiltration of the peri-intestinal fat (64%). The involvement of the large intestine was more common among children (100%). Complications of Crohn's disease were found commonly in adults (40% of adults, 22% of children). There were observed 18 fistulas (14 adults, four children) and six abscesses (2 adults, four children). MRE is a reliable method in the evaluation of Crohn's disease activity, especially of its complications. The lack of radiations makes MRE well-tolerated modality, which can be often repeated, particularly in young patients. The disease had different medical signs depending on age - children often had a more active inflammatory process, but there were more complications in the adult group.

Keywords : Crohn's disease, diagnostics, inflammatory bowel disease, magnetic resonance enterography, MRE

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