Radiation Enteritis

Drissi Abdel-Ilah M, Retal Hamza, Hounayda Jerguigue, Rachida Latib, and Youssef Omor

Department of Radiology, Faculty of Medicine and Pharmacy of Rabat, Oncology National Institute, Ibn Sina University Hospital, Rabat, Morocco

Clinical Image

Radiation enteritis (RE) or radiation enterocolitis (RE) is defined by a set of digestive manifestations involving the small intestine, colon, and rectum occurring after abdominopelvic irradiation, markedly reduced since the development of new modern radiation techniques but it can be favored by certain risk factors such as obesity, diabetes, inflammatory bowel disease (IBD) as well as excessive irradiation. 5% to 15% of patients treated with radiotherapy (usually >4500 Gy) develop chronic enteropathy. The acute RE manifests mainly by an acute diarrhea around the 2nd week after irradiation and regresses 2 to 4 weeks after the end of radiotherapy, requiring a temporary interruption of treatment. The chronic ER occurs 2 months to 30 years after the end of radiotherapy responsible for chronic constipation by intestinal stenosis or diarrhea and under nutrition by malabsorption as well as abscesses, fistulization and ulcers with rectal bleeding. CT and MRI mainly show thickening of the intestinal wall with diffuse submucosal edema responsible for narrowing of the lumen, sometimes complications such as obstructions and fistulas (Figures 1 and 2). The differential diagnosis arises mainly with tumor recurrence, IBD, digestive lymphoma or mesenteric ischemia. Medical treatment of Radiation Proctitis is based on corticosteroid enemas, endoscopic treatments (thermo coagulation, electrocoagulation), and surgical treatment as a last resort in case of failure of medical treatment. Prevention is based on limiting the irradiation field, with identification of organs at risk and optimization of radiotherapy doses.

Keywords: Radiation enteritis; Radiotherapy; MRI

Figure 1: Pelvic MRI in a 45-year-old patient followed for cervical cancer treated by radio and chemotherapy who presented with acute diarrhea. Coronal (A) sagittal (B) section T2 and axial T1 before (C) and after contrast enhancement (D) showing a significant recto-sigmoid wall thickening, diffuse circumferential with sub mucosal edema, and intense enhancement on a post-contrast characteristic of a radiation proctitis.

Figure 2: Chorioretinal detachment on ocular ultrasound.

Declaration of Interests

The authors declare that they have no competing interests.

Corresponding author: Abdel-Ilah MD, Department of Radiology, Faculty of Medicine and Pharmacy of Rabat, Oncology National Institute, Ibn Sina University Hospital, Rabat, Morocco, Tel: +212700162660; E-mail: abdel2018aroua@gmail.com


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