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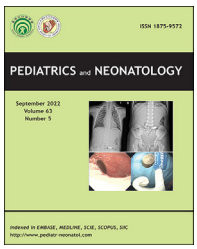

Letter to the Editor

From bone pain to abdominal pain: When chronic recurrent multifocal osteomyelitis is associated with ulcerative colitis

Herein, we report the case of a 10-year-old white girl who presented with a 6-month history of diffuse bone pain and difficulty in walking. Whole-body magnetic resonance imaging (MRI) showed several areas of signal abnormality, suggesting the diagnosis of chronic recurrent multifocal osteomyelitis (CRMO).

After 1 year, abdominal pain and mucus in stools occasionally occurred in the absence of diarrhea and ematochezia. Despite being rare, fluctuating fecal calprotectin value and abdominal symptoms led us to consider the association of CRMO with inflammatory bowel disease (IBD). The upper gastrointestinal (GI) tract was free of lesions; however, lower GI endoscopy showed aphthous colitis. However, the histological examination did not allow the differentiation between Crohn's disease and ulcerative colitis (UC). Therefore, the diagnosis was IBD unclassified. Consequently, considering the osteoarticular and abdominal involvement, treatment with salazopirine was started, which helped to control the bone pain for 3 years.

After 3 years, the adolescent reported increased bone symptoms, particularly with left calcaneum pain (Fig. 1), whereas her IBD remained clinically suppressed. Selective MRI did not show bone lesions but laboratory investigations showed elevated inflammatory markers (C reactive proteins [CRP]: 58 mg/l, erythrocyte sedimentation rate [ESR]: 88 mm/h, and immunoglobulin G: 21 g/l) and a sharp increase of fecal calprotectin (1192 mg/g). Therefore, the GI tract evaluation was repeated. Colonoscopy with retrograde terminal ileoscopy showed exclusive pancolitis erosions and ulcers with histological features of chronic active colitis, crypt architectural distortion, and absence of granuloma. The final diagnosis was UC associated with CRMO. Thus, the treatment with tumor necrotic factor-alpha (TNF-α) inhibitors was started. After 1 month of the therapy, the inflammatory marker had been completely negativized, and at 6 months from the beginning of the therapy, the complete regression of each bone lesion was observed in total body MRI.

CRMO is a rare autoinflammatory bone disease characterized by the presence of mono- or multifocal aseptic bone lesions, which can be either symptomatic or asymptomatic. The local symptoms are pain, swelling, and heat. Sometimes, fever and increased inflammatory markers (ESR and CRP) also occur. Moreover, in 10% of the patients, the inflammatory process can involve the GI tract with IBD[1]; therefore, it is important to check for fecal calprotectin levels even in the absence of abdominal symptoms.

The association of CRMO and other autoinflammatory diseases has been reported in the literature, and CRMO can often precede the symptoms of other autoinflammatory diseases, making it important for physicians to stay attentive to new symptoms during the evolution of the disease.[2]

In the literature, the most reported association is with IBD. In their review, Audu et al. estimated the incidence of the association with IBD in children aged <16 years to be approximately 1/1,000,000 per year[3] in the United Kingdom in 2015; fewer reports of the association between CRMO and UC can be found in the literature compared with those on the association between CRMO and Crohn's disease.[2,4]

Much remains poorly understood in terms of the etiology of these associations, and the natural history is variable. Some authors have proposed a genetic predisposition to both conditions, whereas others have suggested that CRMO usually precedes IBD because bowel inflammation can be triggered by aberrant GI mucosal responses to commensal gut bacteria.[3]

CRMO typically resolves gradually within 1–2 years of treatment[2]; however, in some cases, chronic bone pain and disability are reported.[3]

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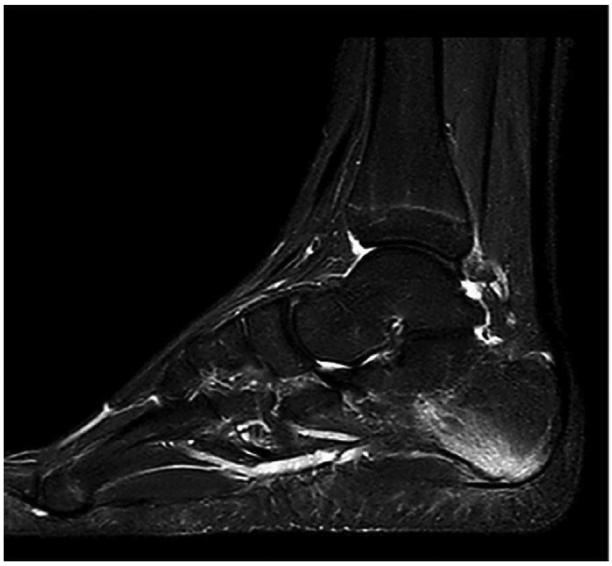

Figure 1 Detail of WB-MRI showing the involvement of left calcaneum in CRMO.

The treatment of CRMO is not standardized and includes the administration of nonsteroidal anti-inflammatory drugs, corticosteroids, and disease-modifying antirheumatic drugs, especially methotrexate or sulfasalazine, bisphosphonates, and TNF-α inhibitors.[5]

When CRMO is associated with IBD, the use of biologic agents is considered the appropriate choice of treatment for both conditions. In particular, TNF-α inhibitors have been demonstrated to offer the best improvement and remission of bowel and bone lesions.[6]

Declaration of competing interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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