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CHRONIC RECURRENT MULTIFOCAL OSTEOMYELITIS (CRMO): RESPONSE TO TREATMENT WITH METHOTREXATE IN CHILDREN AND ADOLESCENTS

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BACKGROUND

Chronic recurrent multifocal osteomyelitis (CRMO) is a rare osteopathy characterized by episodes of sterile bone inflammation. It is classified under the umbrella term of “chronic noninfectious osteitis”. There are no randomized-controlled trials analyzing the optimum treatment strategy in CRMO. Nonsteroidal anti-inflammatory drugs are usually the first line treatment and bisphosphonates are also reported to be effective. However, there is a discrepancy in the literature regarding the efficacy of many drugs in the treatment of CRMO. Case studies and small case series have been published addressing the treatment of CRMO with various medications including corticosteroids, DMARDs (MTX and sulfasalazine), pamidronate and biologics.

MATERIALS AND METHODS

We retrospectively reviewed clinical, biological, radiological data and response to treatment of 20 children with CRMO from March 2009 to December 2019. The data were obtained through review of hospital charts.

RESULTS

Twenty patients were assessed (7 females and 13 males) with a median age at diagnosis of 11.3 years (range 4–17 years). The median number of initial bony lesions was 2.5 lesions. Median time from first symptoms to diagnosis was 26.6 months (range 6–74 months) and median duration of disease was 50.5 months. All patients were initially treated with NSAIDs, 16 patients (80%) with methotrexate, 2 patients (10%) with bisphosphonates, 2 with anti-TNF and 3 patients we have lost follow-up. Nine patients achieved complete remission, 3 patients had partial response and 1 failed after 2 years of MTX treatment. Three patients had less than 12 months of treatment and already showed some improvement. In one patient, MTX was suspended for digestive intolerance. All patients were evaluated by MRI at the beginning of treatment and after 2 years to show the radiological improvement (Fig. 1).

Figura 1. Results.

CONCLUSION

In these series of cases, most of our patients who were treated with MTX with or without NSAIDS presented a good response. Our experience indicates that methotrexate may be an effective option in the treatment of CRMO for patients who do not respond to NSAIDS alone and we have shown that it was able to reverse the inflammatory lesions in the bone evidenced by imaging.

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