Isotretinoin, 13-cis-retinoic acid, is a systemic retinoid acid, which is used for the treatment of various acne lesions that are resistant to other treatments. There are broad spectrums of side effects associated with isotretinoin, which may involve the reproductive, skin, ocular, neurological, hepatic, and musculoskeletal systems. Unilateral or bilateral reactive sacroiliitis is a rare side effect associated with isotretinoin. Here we present a case of a young 15-year-old male, who developed unilateral sacroiliitis associated with isotretinoin use, and he completely recovered after discontinuing the medication. (see Fig. 1).

The patient was admitted to our ward, presenting with an intermittent low grade fever that persisted for 2 weeks, myalgia, and progressive left hip pain. There was no infectious symptom/sign and no eye, mucosa, or gastrointestinal involvement. He denied recent trauma or systemic disease history. He used no medications, except isotretinoin, which was described to treat his acne one month ago (at a dose of 20 mg/day). Due to the persistent fever and progressive pain, he stopped administering isotretinoin 9 days before admission. The fever subsided one day after admission. On physical examination, pain was felt over the left thigh and hip, and a limited range of motion was noted. Gaenslen’s test, thigh thrust test, and Patrick’s test were all positive. The muscle power and deep tendon reflex were normal. Laboratory examinations showed complete blood cell count, and biochemistry tests were all within normal limits. No elevation of C-reactive protein (CRP) (0.72 mg/dl), procalcitonin (PCT) (<0.05 ng/dl), or creatine kinase (CK) (99U/L) was noted. The erythrocyte sedimentation rate (ESR) was mildly elevated (44 mm/h). Anti-nuclear antibodies (ANA), rheumatoid factor (RF), C3, C4, and anti-cyclic citrullinated peptide (anti-CCP) antibodies were all within normal limits. Human leukocyte antigen B27 (HLA-B27) was negative. Bilateral hip plain X-rays revealed blurring and focal bone erosion in the left sacroiliac joint. Hip MRI showed no evidence of septic arthritis or osteomyelitis in

![Figure 1](https://doi.org/10.1016/j.pedneo.2020.05.007)  
MR images with STIR sequences in coronal and oblique--coronal planes showing left sacroiliitis with bone marrow edema and soft tissue swelling.
the left hip. However, compared with the right side, subchondral marrow edema in the left sacroiliac joint was noted, and sacroilitis was diagnosed. After admission, sulfasalazine 500 mg q12 h was given for suspected rheumatic disorder. Steroids were used, and empirical antibiotics as oxacillin was given for septic arthritis or osteomyelitis, which could not be totally ruled out initially. Because the fever subsided in less than one day after admission and there was no local heat, swelling, or erythematous change in the involved joint, no elevated CRP or PCT, and no sign of septic arthritis or osteomyelitis on MR images, the diagnosis of septic arthritis or osteomyelitis was not favored. Non-steroidal anti-inflammatory drugs (NSAIDs) and muscle relaxants were given for pain relieving. The pain sensation relieved gradually days after admission. Subsequent laboratory tests were made, and the ESR was shown to gradually decrease to normal range. The symptoms totally subsided 2 months later, and no abnormal finding was noted on physical or neurological examination. No recurrence was observed in the following 6 months.

In conclusion, many medications could induce symptoms similar to arthralgia. Isotretinoin should be added to this list of medications. Although not common, the reported prevalence of isotretinoin-induced sacroilitis is 2.38%–8.20%. Doctors should be aware of this side effect especially if the patient presented with acute arthritis or inflammatory lower back pain.

Declaration of Competing Interest

The authors declare that they have no conflicts of interest relevant to the material discussed in this article.

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