

Reactive arthritis following tonsillitis

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Abstract

Reactive arthritis following upper respiratory tract infections is well known. The usual age group is young adults and management of the arthritis with anti-inflammatory medication is the mainstay of treatment. We present a case of reactive arthritis following tonsillitis, which was successfully treated by tonsillectomy.

Keywords

Reactive arthritis; tonsillitis; tonsillectomy.

Case report

A 35-year-old man was referred to the ENT Department from the rheumatologists with a history of recurrent sore throats for the last 5–6 years. He had been suffering from reactive large and small joint polyarthritis (especially his wrists, the small joints of his hands, knees

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and feet) but no spondyloarthropathy for the last 2 years following each sore throat. His arthritis improved following antibiotics for the sore throat.

ENT examination revealed chronically inflamed tonsils. Investigations included throat swabs and various blood tests. The throat swabs were always negative; liver function tests were slightly deranged, erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) levels were high on two occasions (11 mm, 16 mg/ml and 18 mm, 27 mg/ml, respectively) and anti-streptococcal antibody titre (ASOT) was positive on three separate occasions, rising each time (400 IU/ml, 800 IU/ml and 1000 IU/ml). His immunological profile was normal (Ig levels normal; rheumatoid factor, anti-nuclear antibodies (ANA), smooth muscle actin (SMA) and anti-mitochondrial antibodies (AMA) negative). Human lymphocyte antigen (HLA) B27 was never requested. X-rays of his hands did not show any erosions. A bone scan showed increased activity at the radiocarpal joints and carpus on both sides, and increased activity at all carpometacarpal joints and many of the interphalangeal joints on both sides. In the feet, the most intense increase in activity was on the left side at the 5th metatarsophalangeal (MTP) joint; there was also increased activity at a number of the other MTP joints on both sides and in the right tarsus. The knees were generally a bit hot but symmetrical while the axial skeleton looked normal.

He underwent a tonsillectomy within 6 weeks with postoperative antibiotic cover to prevent worsening of his arthritis. He had a fairly uneventful postoperative course with minimal flare up of his arthritis in the 2 weeks following the operation. Histology of the tonsils was consistent with mild acute tonsillitis.

He was seen at follow up a month later and was feeling much better after recovering from the operation. At his latest follow up, 6 months postoperatively, he had not suffered any further sore throats or flare up of his arthritis. His ESR and CRP levels on two occasions were within normal limits (6 mm and <5 mg/ml) and the dosage of his anti-inflammatory regimen had been significantly reduced. ASOT had not been requested again since he has not suffered any further attacks of sore throat. The rheumatology team had declared him almost free from arthritis and he is awaiting a final follow up in 6 months time.

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Discussion

Reactive arthritis has been defined as a sterile inflammatory arthritis occurring in conjunction with bacterial infection at a site distant from the joints. It has been suggested that this type of disease may be a form of acute rheumatic fever although there is a very low prevalence of the clinical manifestations described in Jones' major criteria (arthritis, carditis, chorea, erythema marginatum and nodules). Previous reports have postulated the relationship between streptococcal tonsillitis and reactive arthritis. It has thus been termed post-streptococcal reactive arthritis rather than acute rheumatic fever^[1]. There appears to be stronger evidence to label this a reactive arthritis induced by tonsillitis and cured by tonsillectomy^[2]. Reports have also provided evidence for the role of streptococcal infection as a causative agent of reactive arthritis in adults^[3].

Other studies investigating this link have been undertaken. The effect of tonsillectomy on rheumatoid arthritis was reported as a decrease in the degree of pain and amelioration of the disease^[4,5]. Tonsillitis as a causative factor for skin lesions of pustulosis palmaris et plantaris has also been investigated and improvement following tonsillectomy has been noted^[4].

We believe that tonsillectomy is a viable treatment for patients with reactive arthritis following streptococcal sore throats and should be considered early on in the management of this condition.

Teaching point

This report provides further evidence that streptococcal infection has a causative role in reactive arthritis in adults. Other infectious diseases were ruled out by their absence. Tonsillectomy is a viable treatment which can cure these cases related to their throat symptoms.

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