

A Successful Treatment of Anterior nodular Scleritis with Topical Corticosteroids in a patient with Crohn's Colitis

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Abstract

Scleritis is a chronic, painful, potentially blinding disorder that may also involve the cornea, the adjacent episclera and the unvel tract. It is often associated with ocular complications (corneal changes, glaucoma, cataracts) and in up to 50% of patients it is accompanied by an underlying systemic illness such as rheumatoid arthritis, Wegener's granulomatosis or inflammatory bowel diseases (IBDs). It is considered to be a relatively rare extra-intestinal ocular manifestation of IBDs (about 2%). This case report represents an anterior nodular scleritis in a patient with Crohn's colitis who had been primarily treated with topical ophthalmic corticosteroids, and was on infliximab therapy for the underlying disease for three years. Treating a mild form of scleritis with topical corticosteroids could be a reasonable therapeutic option for patients receiving an anti-TNF agent for subadjacent inflammatory bowel disease, in order to avoid further immunosuppression with systemic anti-inflammatory drugs.

Keywords: Scleritis; Ocular manifestations of inflammatory bowel disease; Treatment of scleritis; Topical therapy for scleritis

Introduction

Scleritis affects a small number of patients with Crohn's disease. Clinical manifestations consist of severe, penetrating pain that radiates to the forehead, brow, jaw or sinuses and usually awakens the patient during the night and is only temporarily relieved by analgesics. The treatment should be aggressive-something that didn't happen in our patient after his insistent refusal to do so-because of the possibility of irreversible loss of vision. Although our patient had been treated with topical ophthalmic corticosteroids, the clinical outcome was unexpectedly good without any complications during follow-up period. This approach seems to be a reasonable therapeutic option for mild inflammation of the sclera instead of systemic NSAIDs or steroids, which could intensify the immunosuppression of an anti-TNF factor.

Case Report

A 41-year-old male Greek army staff member presented in our department for routine therapy with an anti-TNF agent (infliximab) for Crohn's colitis disease, which had been diagnosed in September 2005. Since July 2009 he had been undergoing therapy with infliximab every 8 weeks because of refractory Crohn's disease with other treatments (5-ASA, corticosteroids and immunosuppressant's). During the standard clinical examination, we found a firm, tender scleral edema and dilation of the right eye and the sclera appeared diffuse and deep red with a prominent scleral nodule (Figure 1).



Figure 1: Figure showing dilated, inflamed scleral vasculature and a prominent nodule (black arrow).

A slit-lamp examination revealed inflamed scleral vessels with a crisscrossed pattern that were adherent to the sclera. They could not be moved with a cotton-tipped applicator, which distinguishes inflamed scleral vessels from more superficial episcleral vessels. These findings were indicative of scleritis according to the ophthalmologists. This manifestation was treated with topical corticosteroids, including dexamethasone and loteprednol etabonate, after the patient refused to receive systemic anti-inflammatory drugs. After 8 weeks of therapy he came back for planned treatment and there was a significant remission of his ocular redness and tenderness (Figure 2). Our patient completed the topical corticosteroid therapy in 3 months.



Figure 2: Figure showing a clear improvement of inflamed sclera after treatment with topical steroids.

Discussion

Ophthalmic complications of IBD have been recognized [1-3] ever since the first description of two patients with conjunctivitis and corneal infiltrates resembling xerophthalmia by Crohn in 1925 [4]. The prevalence of scleritis in the general population is estimated to be 6 cases per 100,000 people, but has been described in 0.2% to 6.3% of patients with RA and up to 7% of those with Wegener's granulomatosis [5-8]. Scleritis related to Crohn's disease is uncommon in Greece and generally worldwide (about 2-5% of extra-intestinal manifestation of IBD) [3,7,8]. Scleritis may occur in any age group but usually presents between the third and fifth decade of life [2,9]. Women are affected approximately twice as often as men and there is no racial or geographic predilection [2,9]. There is no known association with HLA [10]. Scleritis can be anterior (90% of cases) or posterior. The subtypes of anterior scleritis are: diffuse type, nodular anterior scleritis and necrotizing type with or without inflammation. Clinical features consist of severe, constant pain that worsens at night and usually radiates to the face and periorbital region. Additional symptoms include headache, watering of the eye, ocular redness and photophobia. During ocular examination, scleritis presents with a characteristic violet-bluish hue with scleral edema and dilation. Examination in natural light is useful in differentiating the subtle color differences between scleritis and episcleritis. In slit-lamp biomicroscopy, inflamed scleral vessels often have a crisscrossed pattern and are adherent to the sclera, as has already been highlighted. Complications of the disease may include peripheral ulcerative keratitis and corneal melting syndrome, anterior uveitis, exudative retinal detachment, glaucoma and cataracts. The differential diagnosis should include episcleritis, iritis, anterior uveitis, keratoconjunctivitis sicca, blepharitis and conjunctivitis. The diagnosis should be carried out as soon as possible because the initiation of therapy is crucial, in order to prevent vision impairment. According to the literature on scleritis treatment, therapy requires systemic use of nonsteroidal anti-inflammatory drugs (NSAIDs), corticosteroids, immunosuppressive drugs (Methotrexate, Azathioprine, Mycophenolate mofetil, Cyclosporine, Tacrolimus, Cyclophosphamide, Chlorambucil) or biological factors in some systemic diseases (RA, Wegener's granulomatosis) [2,11-14]. However, there are no guidelines regarding the use of anti-TNF factors in patients with scleritis, particular in those with IBD [14-16,18]. For anterior nodular scleritis in particular, the initial treatment should be NSAIDs (such as indomethacin 20-75 mg PO three times daily), and if this therapy fails, the patient should be

treated with systemic glucocorticoids (prednisone 1 mg/kg per day up to 80 mg daily with gradual tapering) [4,18]. Although our patient didn't follow these instructions for personal reasons, the clinical symptomatology improved impressively during the first month of treatment with topical corticosteroids (eye drops), and after 2 months the improvement in his clinical condition was outstanding. The present case illustrates an unexpected outcome after topical ophthalmic treatment with corticosteroids in a patient with scleritis who had experienced an ocular manifestation of Crohn's colitis while he was undergoing infliximab therapy. The result was unexpectedly impressive, with a reduction of painful symptoms and an amelioration of eye appearance without using systemic NSAIDs, corticosteroids or immunosuppressants. This approach seems to be a reasonable therapeutic option for mild inflammation of the sclera instead of systemic NSAIDs or steroids, which could intensify the immunosuppression of an anti-TNF factor. More systematic studies should be done in order to reveal new treatment approaches to limit the immunosuppression to the lowest level in patients already receiving anti-TNF agents.

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