Case Report

Rare Presentation of Nodular Episcleritis with Tuberculosis in A 12 Year Old Girl: A Case Report

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Abstract *Nodular episcleritis when recurrent and bilateral, needs to be investigated. Extrapulmonary tuberculosis with scleral manifestations is rarely reported. Herein, we present a case of tubercular nodular episcleritis in a 12-year-old young girl with positive tuberculin gold test and strong mantoux positive, responded very well to anti tubercular treatment with topical steroid treatment and no relapse of symptoms noted at 1 year follow up.*

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Keywords: *Episcleritis, Tuberculosis, Nodular Episcleritis, Ocular Tuberulosis*

Introduction

Episcleritis a benign inflammatory condition is of two types diffuse and nodular. Diffuse is more common (70%) than the nodular type (30%). Most cases are idiopathic but systemic association is not uncommon. Ocular association with tuberculosis is seen in 1-2% of cases being conjunctiva, cornea, uvea and sclera are the primary sites involved. Thus we present a case of bilateral nodular episcleritis in a young 12 year old girl.

Case Report

A 12 year old girl came with recurrent complaints of mild pain, redness, watering and rounded up lesion formation in both the eyes since one and a half year. She was given one subconjunctival injection of steroid and atropine elsewhere, but finds, not much relief in her symptoms. There was no associated history of trauma, joint pain, dryness of mouth, discharge or any other systemic illness.

She was thinly built with BMI (body mass index) 15.3. Her vital parameters were within normal limits. There was no associated palpable cervical lymph node. Her visual acuity was 6/12 in right eye improving to 6/9 and 6/6 in left eye. On ocular examination a pinkish nodule of 3 mm located 4 mm nasally away from limbus in right eye (Figure 1a). And a nodule of 3mm size located 1mm away superiorly from limbus in left eye was seen (Figure 1b). Nodules in both eyes were freely movable and episcleral vessels in the nodular region were engorged. Intraocular pressure was 14 mm Hg and 16 mm Hg in right and left eye respectively. On fundus examination with scleral indentation periphery appeared to be normal. Rest other ocular examinations were found to be in normal limits.

On routine investigations her complete blood count indices were in normal range. Mantoux test was 18x 15mm induration after 72 hours, ESR was 28 mm/hr and haemoglobin was 9gm. Gamma interferon assay test was also positive with 4.97 IU/Ml units. Chest X-ray was however normal. HRCT chest showed normal lung density and architecture and no nodular parenchymal lesions was seen. She was started on CAT I drugs of revised national tuberculosis control program (RNTCP). She was started on four drugs isoniazid 200mg, rifampicin 600 mg, pyrazinamide750 mg, ethambutol 600 mg once a day for two months and later on two drugs

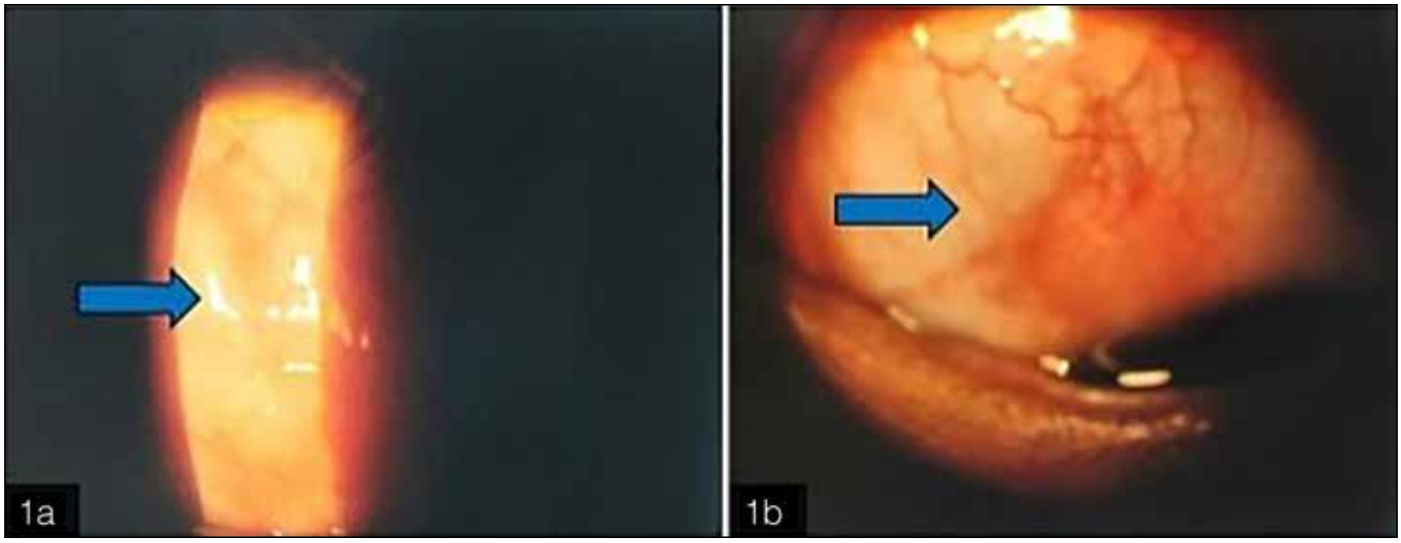

Figure 1: *(1a), (1b) Anterior segment image showing elevated nodule in right eye nasally and left eye superiorly (Blue arrows)*

isoniazid and rifampicin for four months. She was advised prednisolone acetate eye drops, 1 % was instilled 6 times a day with tapering dose of 7 days. On her 15th day follow-up, her lesions were reduced (Figure 2a) and (Figure 2b). At one month her appetite increased, lesions completely disappeared, watering reduced and redness subsided and her intraocular pressure was recorded as 16mmHg and 18 mm Hg in right and left eye respectively. At 3 month there was overall improvement in her general well being, her weight increased and only slight reddish hue was present, IOP was recorded as 16 mm Hg and 18 mmHg in right and left eye respectively. On her 6th month follow up, her ocular symptoms watering, redness subsided, there was no recurrence of disease (Figure 3a, 3b). No flaring of disease was observed. No maintenance NSAID were prescribed

Discussion

Mostly cases of episcleritis and scleritis are idiopathic. The incidence of systemic disease is approximately 39% to 50% for patients with scleritis.[1] Association of tuberculosis have been found in 1-2% of cases of scleritis. Systemic association is found only in one third of cases in episcleritis. Most common association of episcleritis is with Rheumatoid Arthritis.[2] Other significant causes are Atopy, Waegner's granulomatosis, Rosacea, Gout, Herpes Simplex. Association of tuberculosis with episcleritis is very rare and is usually due to haematogenous spread from distant site or from direct invasion from adjacent areas of skin.[3] Usually episcleritis is treated with topical steroids but in cases of underlying systemic association, cause has to be treated. In view of high Mantoux test positive, Gamma interferon, endemicity of tuberculosis in India and clinical response to ATT, a diagnosis of Tubercular nodular episcleritis was made in both eyes. A similar case of nodular episcleritis was reported by Bathula et al., in a 12 year old child, who presented with the similar complaints since six months. Child was started on ATT and after two months of treatment there was complete resolution of signs and symptoms.[4] Yadav S et

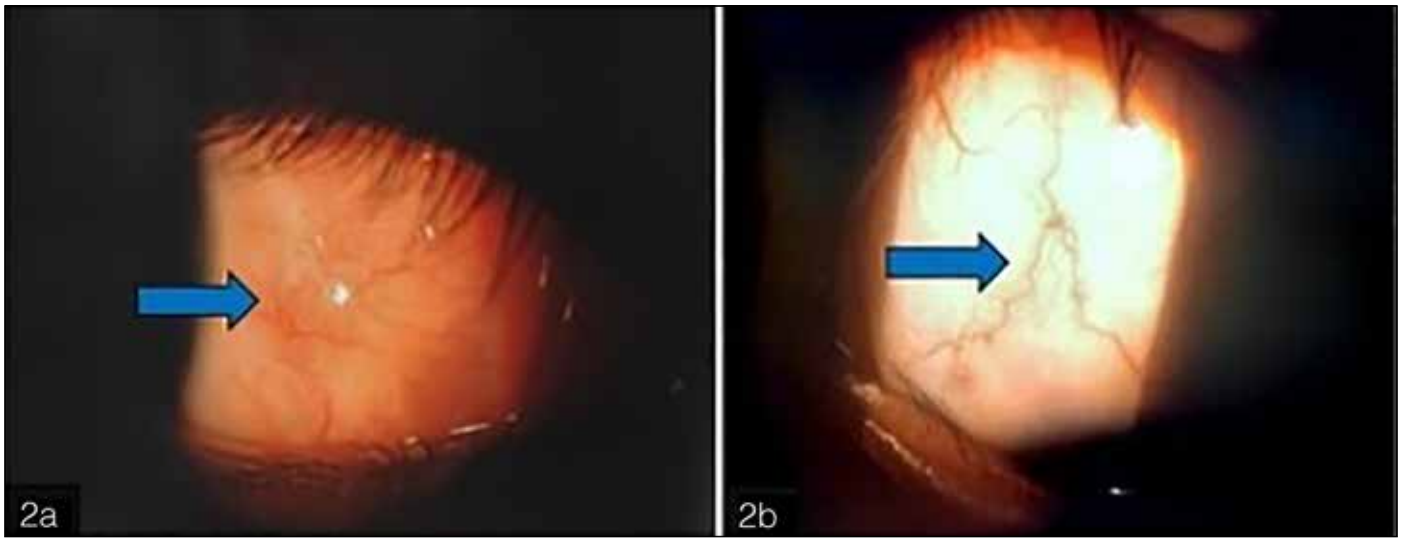

Figure 2: *(2a), (2b) Comment: High Resolution Photograph - On 15th day follow up, lesions reduced and redness subsided in right eye and left eye respectively (Blue arrows)*

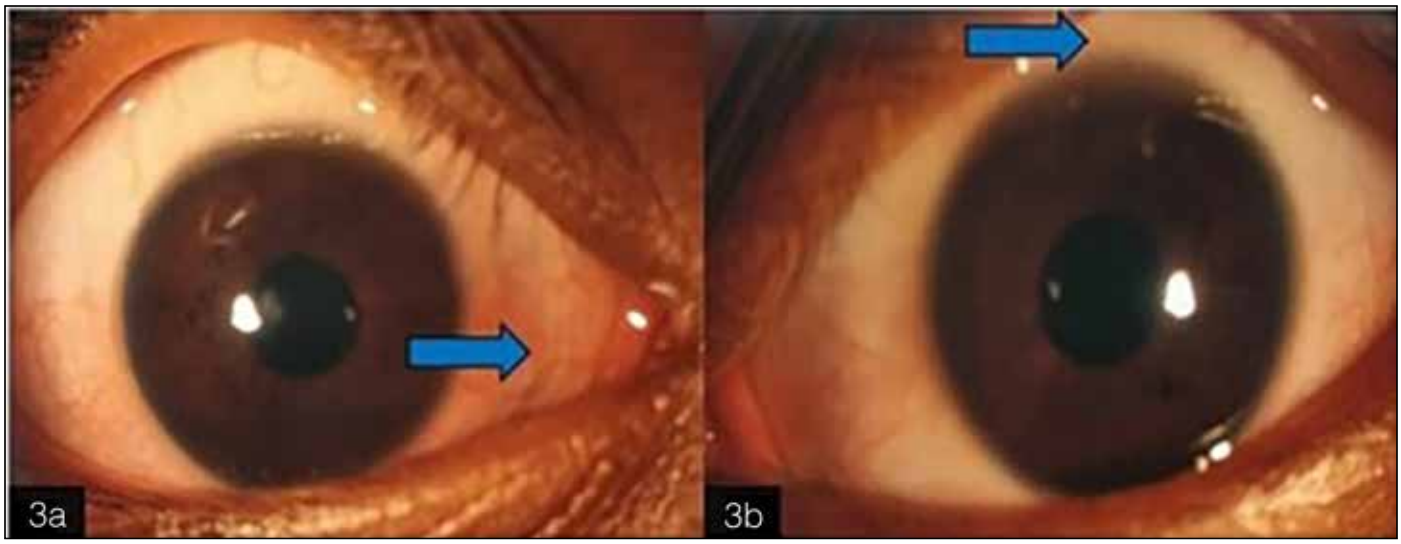

Figure 3: *(3a), (3b) On 6th month follow-up, anterior segment image showing complete absence of ocular signs in Right Eye and Left Eye respectively (blue arrows)*

al reported a similar case in 30 year old Indian male, he had similar complaints since 1 month, it was his first episode. He was also started on ATT with use of topical lubricants and on follow-up showed signs of improvement.[5] Though our case was bilaterally affected and has a longer follow up then the previously reported cases. Topical steroids were considered owing for the symptomatic relief in young girl and IOP was monitored at all follow up visits. It's conjugation with ATT in cases of recurrent episcleritis in a young girl has not been documented to best of our knowledge.

Conclusion

This case suggests that tuberculosis is an important cause in bilateral recurrent episcleritis in children. Ophthalmologist need to be vigilant about diagnosing and treating the underlying pathology.

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