An Interesting Case of Scleritis

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Case History

A 30 year old female patient presented to our outpatient department on 23-5-09 having been referred with a diagnosis of ? choroidal detachment /? subretinal hemorrhage. This diagnosis was made from a CT Scan taken by an ENT consultant to evaluate headache and ocular pain.

The patient complained of chronic low grade pain and redness of at least a months duration. She also complained of moderate visual loss. Her systemic history was uncontributory and she had been on oral nonsteroidal anti-inflammatory agents for the preceding three weeks.

Your valuable opinion on investigations and management is solicited

Dr. Rajesh P.

The clinical picture of pain, deep scleral congestion, solid sub retinal elevation and exudative detachment

Ocular examination revealed the following findings:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Right eye</th>
<th>Left eye</th>
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<tbody>
<tr>
<td>1. Uncorrected vision</td>
<td>6/60</td>
<td>6/6</td>
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<tr>
<td>2. Near Vision</td>
<td>N36</td>
<td>N6</td>
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<td>4. Anterior segment</td>
<td>Deep scleral</td>
<td>Localised</td>
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<td></td>
<td>congestion and tenderness</td>
<td>Normal</td>
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<td>5. Fundus (Fig 1 a&amp;b)</td>
<td>Solid subretinal elevation</td>
<td>Clear Media,</td>
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<td></td>
<td>temporal to macula.</td>
<td>Normal</td>
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<td></td>
<td>Macular edema, Inferior exudative RD</td>
<td>Normal</td>
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<td>6. B Scan</td>
<td>Solid Hyper reflective elevation.</td>
<td>Normal</td>
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<td></td>
<td>No definite T Sign</td>
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<td>7. FFA (Fig 2 a&amp;b)</td>
<td>Hypofluorescence to pinpoint leaks with pooling</td>
<td>Normal</td>
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<tr>
<td>8. OCT</td>
<td>CRT 525 microns.presence of subretinal fluid</td>
<td>Normal</td>
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Investigations:

- Hb, TC, DC, Peripheral Smear, Toxo NEGATIVE
- S. Calcium 9.5 mg/dl MANTOUX negative
- ESR 62 mm/hr TB Ig M POSITIVE
- Plain x ray Chest : prominent hilar markings Consultation with chest physician : non-contributory
with B scan findings of sclerochoroidal thickening and FFA picture of pinpoint areas of leakage with pooling suggest a diagnosis of posterior scleritis. Although T sign on B scan is classical of posterior scleritis, at times localized thickening of sclerochoroidal complex with overlying subtenon fluid can also occur in posterior scleritis. History as well as clinical features of rheumatoid arthritis, SLE, relapsing polychondritis, Wegeners, tuberculosis and sarcoidosis will also be sought for. I also would have suggested the same set of investigations for the patient, probably with the exception of ELISA for TB. The reason why ELISA would not have been done is because of its poor reliability in diagnosing active tuberculosis particularly extra pulmonary TB. A positive IgG which is the most common result even in active tuberculosis does not carry much significance in Indian population. IgM which suggests recent infection is not often positive in extra pulmonary TB. Other investigations I would have liked to do in this patients are rheumatoid factor (rheumatoid arthritis), anti ds-DNA (SLE), cANCA (wegener’s), pANCA (PAN) ACE (sarcoidosis) VDRL and FTAbS (Syphilis).

The patient under consideration has positive IgM, but has a negative mantoux. This is a difficult situation to make a decision regarding starting ATT. A TB patient with –ve mantoux could be either immunosuppressed or have miliary form of the disease. In an immunosuppressed state the chances of a positive ELISA is also less. The test like Quantiferon –TB gold test which helps to pick up latent and active TB is not available to us and would have been of greater significance in making a decision regarding starting ATT.

Treatment with oral prednisolone is started at a dose of $1mg/kg$ body weight and is gradually tapered over 3-6 months. Azathioprine or methotrexate is added if the response is poor with steroids alone or as a steroid sparing agent. Any underlying connective tissue disorder is managed in consultation with a physician.

Dr. Mahesh P. Shanmugham

This is a case report of a 30 year old lady with one month history of ocular pain, redness and loss of vision of indeterminate duration. There is no known systemic disease. Information such as loss of weight, appetite, cough, genitourinary, gastrointestinal disease, sinus disease, joint pain and such is not available. It would be necessary to know if there is any evidence of anterior segment or vitreous inflammation.

Fundus photography of the right eye shows a single, grey white subretinal lesion temporal to the macula with macular edema. The borders are irregular and ill-defined in some areas. The color and surface of the lesion are inhomogeneous. Fundus fluorescein angiogram shows initial hypofluorescence with areas of pin-point leaks and late staining with few suspicious areas of leakage and indication of disc staining. Posterior pole photograph of the left eye is normal. Significant anterior segment finding is presence of deep sclera congestion and tenderness; however the location of the scleral congestion is not mentioned. Ultrasound intralesional characteristics of the lesion are not mentioned – high reflective scleral thickening, regular internal structure, tenon’s space edema presenting as “T” sign.

The differential diagnosis would be

1. Inflammatory lesion
2. Neoplastic lesion
3. Neovascular lesion

The young age of the patient, short history, pain, presence of anterior scleral inflammation, tenderness, posterior, unilateral, single, subretinal choroidal lesion, macular edema, disc staining on FA, elevated ESR point
to the possibility of an inflammatory lesion. It is necessary to look for vitreous reaction, particularly overlying the mass using slit-lamp biomicroscopy. Absence of intense overlying reaction is obviously absent indicating that this unlikely to be a choroidal abscess in an immunocompetent patient. Elevated lesion with characteristics mentioned above with anterior scleral inflammation points to a posterior scleritis.

Choroidal metastasis can also be a possibility with cream colored mass associated with secondary retinal detachment in the absence of vitreous inflammation. Points against metastatic tumor are the age of the patient, short history, presence of anterior scleral inflammation. Intraocular lymphoma can also present similarly, rarely in a young patient.

Altered subretinal hemorrhage can appear grey white but should be hypofluorescent on FA with identifiable site of leakage such as a choroidal neovascular membrane or polypoidal choroidal vasculopathy.

**Management**

Mantoux is negative, prominent hilar markings on X-ray, elevated ESR and TB IgM positive. It is essential to rule out pulmonary and extrapulmonary tuberculosis in this patient with a thorough systemic examination. Investigations to rule out connective tissue disease may identify the causative factor for the scleritis.

**Treatment**

Once an infective etiology is ruled out a course of systemic steroids at 1 mg/kg body weight should be instituted and tapered based on response. The patient has been on non-steroidal anti-inflammatory agents without much of a response and hence the need for systemic steroids. If the lesions (the anterior and posterior) do not respond adequately, an incision biopsy of the anterior scleral lesion will be necessary.

Dr Sunil N

The primary complaint is pain, followed by defective vision. There is sclera congestion and tenderness

Fundus shows a subretinal, yellowish irregular lesion, mainly appearing intrachoroidal.

There is no evidence of retinitis. FFA shows pinpoint leaks with pooling in the subretinal space, the leakages are from Chorioidal level. ESR is elevated, significantly.

I feel it is a case of POSTERIOR SCLERITIS with anterior scleral involvement. Posterior Scleritis has various clinical presentations, like- Subretinal mass lesions, Disc oedema, annular CD, etc. T-Sign if present indicates that the site of involvement is near the disc, as the subtenons oedema is continuous with the optic nerve sheath.

**Absence of T-sign does not rule out posterior Scleritis**

As it has feature of pan Scleritis, Connective tissue disorders have to be ruled out. A high ESR is also suggests this possibility.

TB IgM positivity should be further investigated to rule out TB Scleritis, or TB Granuloma.

However even in cases of TB, we have to rule out Scleritis due to Connective tissue disorders, as TB involvement is mostly a diagnosis of exclusion.

A therapeutic trial course of systemic steroids, if gives relief, also will help in diagnosis, as it will definitely point towards Scleriti.

Dr. Meena Chakrabarti

The patient was treated with tapering dose of systemic steroids starting with a dose of 1mg/kg body weight. She responded well to therapy with complete resolution of the lesions and return of normal visual acuity TB IgM positivity was further investigated and a second opinion sought. Based on the pulmonologist’s suggestion a course of 3 drug ATT was started and is to be continued for 9 months.