



Unusual association of leptomeningitis, pachymeningitis, dural sinus thrombosis, posterior uveitis and pathergy in alady with Behcet's disease

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Abstract

Behcet's disease is an autoimmune disease characterised by recurrent orogenital ulcers and neurological disease, ocular disease, thrombosis, arthritis etc. Classically diagnosed using pathergy test even though a majority of the cases do not exhibit the same. In routine clinical practice the International criteria for Behcet's developed by the International study group for Behcet's is used. Despite the diversity in presentations in Behcet's, it is rare to see multiple systemic manifestations in a single patient. Here we present a case with Behcet's meningitis, dural sinus thrombosis, posterior uveitis, recurrent orogenital ulcers and a positive pathergy test all of which are cardinal features of Behcet's that make 6 out of all 7 features considered in the International criteria.

Keywords: Behcet's disease, leptomeningitis, pachymeningitis, dural sinus thrombosis, pathergy test

Case Report

This is the case of a 23 year old unmarried woman, who presented with chronic headache of around 2 months duration. It was predominantly right sided and was persistent and non-episodic. She had no aura and had no history of recurrent headaches in the past. She had no fever, vomiting, altered sensorium, weakness, paraesthesia or history suggestive of cranial nerve involvement. On further enquiry she gave history of recurrent orogenital ulcers for the past 5 years. She had oral ulcers almost every month and genital ulcers every 3 months. Six months back she experienced

vision loss in the left eye for which she was undergoing evaluation from Ophthalmology department. However she lost follow up subsequently. Now she attended our hospital for evaluation of headache.

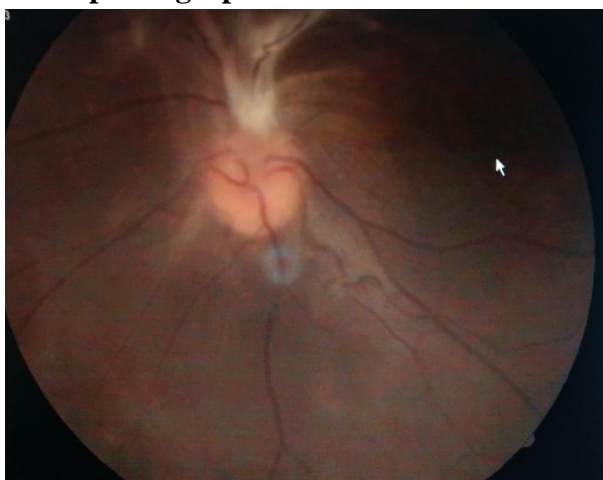
Examination

On examination she was conscious, oriented. Moderately built and nourished. She had no pallor, icterus, cyanosis, clubbing or lymph node enlargement. Her BP was 120/80 mmHg and pulse rate was 88/mt. She had reduced visual acuity in the left eye, 6/30. She had grade 5 power

bilateral upper limb and lower limb, and reflexes were normal. However she had neck stiffness. Her cardiovascular, alimentary and respiratory systems were normal.

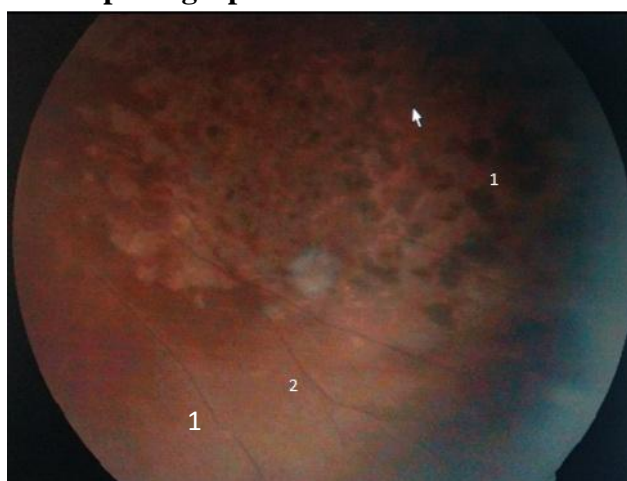
Under suspicion of an ocular pathology, a fundus examination was performed. It showed opacities in the vitreous possibly due to fibrotic changes, thinning of retinal vessels with perivasculitis, and evidence of laser photocoagulation which may have been done for her visual complaints 6 months before. All of these fundus examination findings were suggestive of posterior uveitis. Fundus photographs A, B.

Fundus photo graph A



Opacities in the left fundus due to fibrous proliferation into the vitreous, a result of antecedent inflammation

Fundus photograph B



- 1) Spots in left fundus which were previously subjected to laser photocoagulation
- 2) Thin retinal vessels with perivascular hyperintensity suggestive of retinal vasculitis

Differential Diagnoses

From history and examination we have a 23 year old female with past history of posterior uveitis who now presented with features suggestive of chronic meningitis. Because of her history of recurrent orogenital ulcerations primary impression was that aetiology was autoimmune, possibly Systemic Lupus erythematosus, or Behcet’s disease. Tuberculosis was also considered as it is perhaps the most common cause for chronic meningitis in India. The other possibility considered was sarcoidosis which is similar in presentation to the above, and is a fairly common cause for posterior uveitis.

Investigations

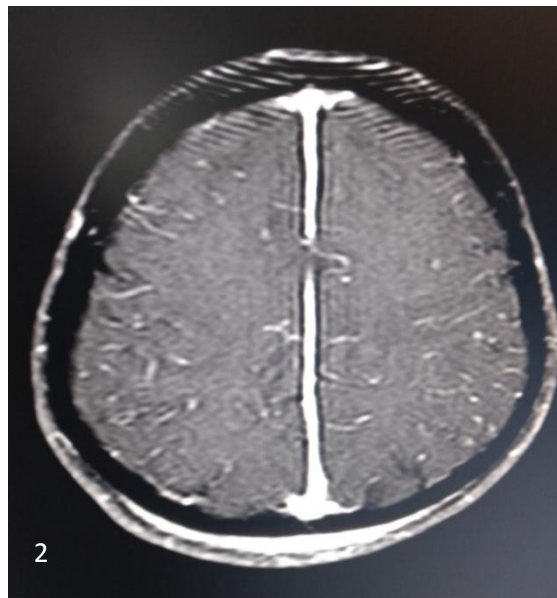
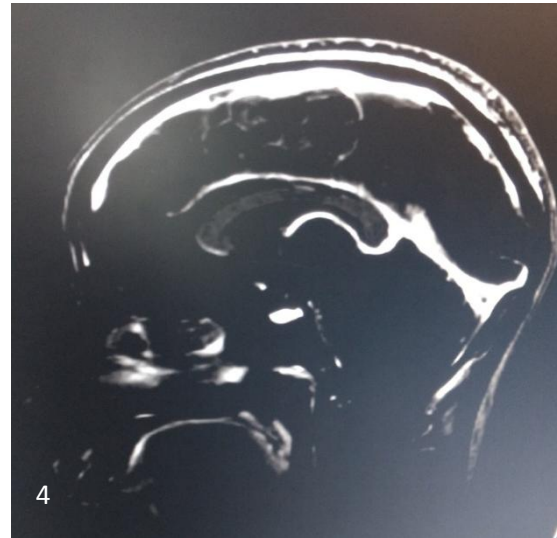
Hb	12.9gm%
TC	10200/mm ³
DC	N71L20M9
HCT	34.9%
MCV	76.4fl
PLT	4.06L/mm ³
ESR	54 mm at 1 hr
RBS	93 mg%
Urea/creat	19/1.0
Na/K	137/3.9
TB/CB	0.8/0.3
AST/ALT	21/12
ALP	64
TP/ALB	6.2/3.7
URE	ALB -TRACE , PC - 0-1

CSF study

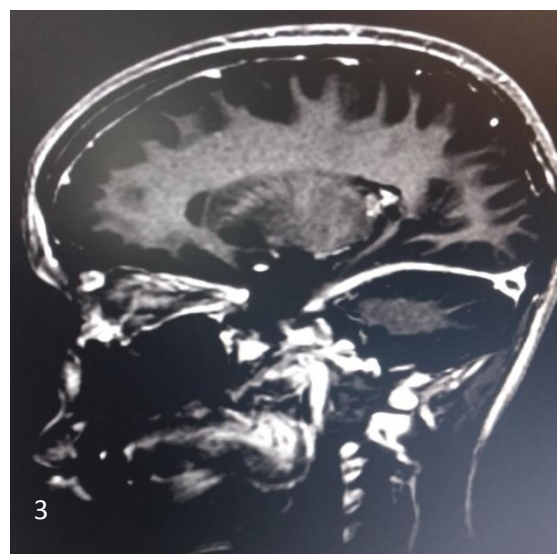
Pressure -240mm of CSF,TC-30,DC-L100%, Protein - 30 mg%, Sugar -87mm% ADA - 2.4 (<10.0)

ANA-IF was done to look for autoimmune causes, and was found to be negative. Mantoux test was negative. Chest Xray revealed no evidence of mediastinal lymph node enlargement/parenchymal involvement.

MRI brain was suggestive of leptomeningitis, pachymeningitis and dural sinus thrombosis in the superior sagittal, right and left transverse and right sigmoid sinuses.



- 1) Pachymeningeal thickening of falx cerebri and tentorium cerebelli
 - 2) Diffuse leptomeningeal enhancement
 - 3) Venous filling defect in right transverse sinus
 - 4) Venous filling defect in superior sagittal sinus
- Pathergy test was subsequently found to be positive. With orogenital ulceration, ocular disease, neurological disease, vascular disease and a positive pathergy test, this patient has a score of 9 out of a maximum of 10 in the International criteria for Behcet's, with 4 being required for diagnosis.



1) Positive pathergy test on right forearm

Management

She was given methylprednisolone pulse at 1g a day for 3 days. Subsequent immunosuppression was maintained with oral prednisolone and azathioprine. In view of dural sinus thrombosis

anticoagulation was started and she is presently on warfarin, dose adjusted to INR 2-3. Her symptoms abated and she is now under follow-up.

Discussion

Behcet's disease is an idiopathic vasculitis that involves arteries and veins of all calibre. It has a chronic relapsing course and is frequently manifested by ocular disease, orogenital ulceration and systemic manifestations. It was described by Greek ophthalmologist Adamantiades in 1931 followed by Hulusi Behcet in 1937 who was a dermatologist. Hence the disease is also called Adamantiades-Behcet's disease⁽¹⁾.

It has the highest prevalence in eastern Mediterranean countries and Asia that is along the ancient silk route, earning it the name "Silk road disease". The prevalence ranges from 0.12 in 100,000 in the US to 1 in 250 in Turkey (highest)⁽²⁾. It shown no gender predilection and is commonly seen from age 25-40. Most cases are sporadic although familial patterns have also been noted. Possible aetiology is autoimmune with HLA-B51 association, but the exact pathophysiology is not known⁽³⁾. More than 95% cases have orogenital ulceration. 75% of cases show ocular involvement in the form of anterior uveitis which classically result in a shifting hypopyon or posterior uveitis which can result in blindness. Ulcers usually start as painful papules that ulcerate with a pseudomembrane.

Skin involvement in Behcet's may be erythema nodosum, folliculitis, acneiform pustules. 50-70 % cases can have arthralgia or arthritis. Vascular involvement is seen in upto 18-20% of cases and can be in the form of aneurysms that may rupture and cause massive haemorrhage or venous thrombosis. Neurological manifestations of Behcet's are stroke, cranial nerve palsies, aseptic meningitis. Mortality in Neuro-Behcet's is as high as 10%⁽⁴⁾. Other rare manifestations include pulmonary arteritis, coronary arteritis, and endocarditis.

Diagnosis is by the International criteria for Behcet's disease, with two points each for oral ulcers, genital ulcers, ocular disease and one point each for vascular disease, neurological involvement, skin manifestation and positive pathergy test. A score >3 is suggestive of Behcet's disease⁽⁵⁾.

Pathergy test, which is a classical feature of Behcet's is not seen in all patients and hence is not diagnostic. It is identified by the development of pustules at the sites of needle insertion.

The treatment of Behcet's is long term immunosuppression. Corticosteroids are used for acute attacks and maintained with azathioprine and cyclosporine with the latter being reserved for severe cases. Colchicine, dapsone and cyclophosphamide have also been tried. Newer therapies include biological agents like adalimumab or rituximab which have shown good efficacy^(1,6).

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