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# UNIQUE CASE OF SARCOIDOSIS WITH UNILATERAL FACIAL NERVE PALSY

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## ABSTRACT

Sarcoidosis presenting with unilateral facial nerve palsy is known as Heerfordt syndrome which is very rare. The features of Heerfordt syndrome include fever, uveitis, parotid gland enlargement and facial nerve palsy. This is a case report of a 32-year old male who presented with symptoms of fever, night sweats, headache, weight loss, impaired vision associated with red eye. Diagnosed to have sarcoidosis with the help of computed tomography of the chest and trans bronchial lymph node biopsy, associated with left facial nerve palsy and anterior uveitis. Following treatment with prednisolone and azathioprine, he recovered completely. This article presents a rare case of neurosarcoidosis presenting as Heerfordt syndrome.

**Keywords: Fever, Facial Nerve, Parotid, Uveitis**

## INTRODUCTION

Sarcoidosis is a granulomatous disease having a multi-systemic involvement, most commonly affects the lung in more than 90% of the cases **[1]**. The incidence of sarcoidosis has been recorded world-wide and it affects people of all age group and all

races. High incidence is seen in young and middle age group people. A wide variety of non-specific presentations are seen involving the lungs, skin, spleen, lymph nodes, heart, nervous system, muscles and bones **[2]**. Constitutional symptoms such as fever, malaise, fatigue, weight loss and night sweats are usually present. Patients with lung involvement often presents with difficulty in breathing, dry cough and chest pain. Neurosarcoidosis usually affects the brain base, so different cranial nerves can be involved but the most commonly involved is the facial nerve. Heerfordt syndrome which was first recorded in 1909 was initially thought to be a presentation of mumps but in 1936 W. J. Bruins Slot found its association with sarcoidosis **[3]**.

**Case Report**

A 32-year old male came to the casualty with complaints of fever, night sweats, dry cough, headache, fatigue, weight loss (8kgs in a month), pain in both the eyes and blurring of vision for 5 days. He also complained of pain in the left side of the face and left ear pain. History of similar complaint one month back with symptoms of difficulty in breathing. On examination patient was concious, oriented to place, person and time. Pulse rate was 88 beats per minute with blood pressure 110/80 mmHg. Patient was maintaining saturation of 99% under room temperature. Physical examination revealed swollen eyelids, persisting left facial nerve palsy of the peripheral type and bilateral parotid gland enlargement. Chest X-ray revealed no significant findings. In fundus examination mild viritis and retinal periphlebitis bilaterally associated with yellowish perivenous exudates which resemble candle wax dripping. Optic disc appearance was normal in both eyes. Patient was treated initially with azithromycin and valacyclovir which showed no clinical progress in management. Differential diagnosis can be infections, systemic or parotid tumours, immune diseases and sialolithiasis. All viral markers and tumour marker turned to be negative. CT of head, abdomen and MRI brain showed no pathology. But CT chest revealed enlarged hilar and mediastinal lymph nodes. Transbronchial lymph node biopsy was taken which showed non-caeseating granulomas with epithelioid cells. Based on these findings the case was diagnosed as Heerfordt syndrome with stage I sarcoidosis. After that patient was started on prednisoslone and azathiopurine. With supportive analgesics, antipyretics, corticosteroids and cycloplegic eye drops were given. Following this therapy patient symptom improved within two months. Complete recovery was attained by nine months. Patient was followed up for about one year with prednisolone 15mg/day and

azathiopurine 100mg/day and noticed no recurrence.

**DISCUSSION**

A rare presentation of neurosarcoidosis is Heerfordt syndrome which most commonly affects the young age group. Cranial nerve involvement is common because neurosarcoidosis usually affect the base of the brain **[1]**, mainly the facial nerve which may be bilateral or unilateral. In case of bilateral facial nerve palsy in a young age group individual, sarcoidosis is most likely. But in unilateral facial nerve palsy, sarcoidosis should be considered as a differential diagnosis. In this case, the patient also had left trigeminal nerve involvement, since he had left V1-V2 hypoesthesia. Ocular involvement in sarcoidosis is more common **[4]**. Ocular manifestations such as granulomatous anterior uveitis , intermediate uveitis, vitritis with pearl-type vitreous opacites, panuveitis, retinal periphlebitis choroidal granulomas and optic nerve involvements may be present **[5]**. These changes resolve completely following treatment. Most common granulomatous diseases in India like tuberculosis and leprosy usually confuses a case of sarcoidosis; hence early diagnosis is not achieved in most cases. But careful clinical and radiological finding supporting noncaseating epithelioid granulomas along with appropriate laboratory investigations like elevated ACE levels, CSF analysis showing pleocytosis and elevated CD4/CD8 ratio in the BAL liquid can yield early diagnosis of sarcoidosis. In Heerfordt syndrome, the nerve involvement can be due to compression by the parotid gland swelling or due to the presence of lesion in the facial canal. Lesion in the facial canal manifest as taste disorders which occurs due to the involvement of chorda tympani, that carries the taste sensation from the anterior two-third of the tongue. Site of lesion can also be identified by electrical and magnetic stimulation, which demonstrate a proximal lesion in the facial canal, where CSF surrounds the facial nerve. In the base of the brain, neurosarcoidosis also causes leptomeningeal inflammation, expands through the facial canal and involve the facial nerve, mainly the chorda tympani branch. Mild case of sarcoidosis usually resolves spontaneously, but in case of cardiac, neurological and ocular involvement not responding to topical treatment requires systemic therapy. Initial dose of prednisolone in case of pulmonary involvement is 20-40mg/day; higher dose is required in cardiac or neurosarcoidosis. Steroids should be slowly tapered to 5-10mg/day and treatment should be continued at least for duration of one year. Steroids can be used along with other

immunosuppressive drugs such as methotrexate 10-25mg/week and azathioprine 50-200mg/day. Following treatment, facial nerve palsy will resolve completely and the patient should be followed up and evaluated after a month.

**CONCLUSION**

Heerfordt syndrome is one of the rare manifestation of neurosarcoidosis. Sarcoidosis should be considered readily in case of bilateral facial nerve palsy in a young adult with no comorbidities and as a differential diagnosis in case of unilateral facial nerve palsy. Following treatment, complete resolution of facial nerve palsy can be expected.

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