Learning from errors

Short duration respiratory illness with abducens palsy in a young man

Vivekanand Undrakonda,¹ Shashikiran Umakanth³¹Department of Ophthalmology, Dr TMA Pai Rotary Hospital, Karkala, Manipal, Karnataka, India;²Department of Medicine, Dr TMA Pai Hospital, Udupi, Karnataka, India;³Department of Medicine, Melaka-Manipal Medical College, Manipal, Karnataka, India**Correspondence to** Dr Shashikiran Umakanth, shashikiranu@gmail.com

Summary

Acute onset of diplopia associated with high-grade fever, sore throat and cough without features of raised intracranial tension in a young patient is an uncommon presentation. A diagnosis of abducent nerve palsy due to pontine tuberculoma associated with miliary tuberculosis was made based on sputum examination, chest x-ray and MRI. On diagnosis, monocular patching of the left eye was performed to avoid diplopia and primary antitubercular drugs with systemic steroids were given. An unfortunate 48 h delay in starting the antitubercular treatment likely decreased the probability of survival.

CASE PRESENTATION

A 20-year-old man presented to the ophthalmology outpatient department of our rural hospital attached to our medical college with chief complaints of diplopia, high-grade fever (39°C) with sore throat and cough.

The patient appeared moderately built and poorly nourished, with no history of any premorbid illness. His best-corrected visual acuity recorded was 20/20 (Snellen chart) in both eyes. Ocular positioning tests revealed an esotropia (30Δ D) for distance and esotropia (60Δ D) for near in primary position. Esotropia increased with horizontal gaze to the left (gaze towards the affected eye). The ductions of the right eye were normal, whereas the left eye showed limited abduction with associated face turn towards the left. No vertical deviations were present. Diplopia charting confirmed horizontal diplopia in the primary position and levoversion. Maximum separation was present in levoversion. Gross observations of the anterior segments of both eyes were normal. His pupils were brisk equally to light and accommodation. Dilated funduscopy was unremarkable, with no evidence of papilloedema.

A medical consultation revealed a congested pharynx and an essentially normal respiratory system examination. A neurological examination of the other cranial nerves and peripheral nerves was unremarkable. In view of the short duration of illness and predominant upper respiratory involvement, a possible diagnosis of viral pharyngitis with postviral abducens palsy was considered. However, other causes such as tuberculosis, neoplasms and autoimmune diseases needed to be ruled out.

INVESTIGATIONS

Diagnostic tests including a complete blood count, erythrocyte sedimentation rate (ESR) and sputum tests were ordered. Results of a haemogram showed a markedly

elevated ESR of 105 mm/h and a white cell count of 12 800 cells/mm³ with 56% lymphocytes. Other parameters such as blood glucose, liver function tests and renal function tests were normal. Results of a HIV monospot were negative.

A chest x-ray could not be performed on that day as the machine was being upgraded in the hospital and the facility was hence unavailable.

Our patient had to be transferred to a higher centre, about 30 km away, for a chest x-ray and MRI scan of the brain. The appointment for an MRI was given the next day. Our patient returned with a chest x-ray that showed bilateral miliary mottling.

The MRI of the brain, plain and with contrast, revealed an ill-defined hyperintense lesion on T2 (TR-5250, TE-112), fluid-attenuated inverse recovery (TR-13000, TE-112) sequences, measuring 11×12 mm involving the pons on the left side with perilesional oedema and mild effacement of the fourth ventricle. On postcontrast T1 (TR-465, TE-17) images, a ring-enhancing lesion was noted within this area of altered signal intensity. The rest of his brain parenchyma showed normal signal intensity with preserved grey/white matter differentiation. The orbits appeared normal. There were no signs of raised intracranial tension.

Sputum test results were positive for acid-fast bacilli. On the basis of these findings, a lateral rectus palsy due to left-sided pontine tuberculoma in a patient with miliary tuberculosis was diagnosed.¹

TREATMENT

The patient was not willing to be admitted to our hospital for treatment, but preferred to go a regional government hospital where tuberculosis treatment would be given free of cost. The next day, he was started on four primary antitubercular drugs, along with systemic steroids and symptomatic treatment.

OUTCOME AND FOLLOW-UP

Unfortunately, our patient died on the seventh day after commencement of treatment.

DISCUSSION

A young patient diagnosed as having abducent nerve palsy should have an urgent investigation of laboratory studies such complete blood cell count, glucose levels, glycosylated haemoglobin, ESR, C-reactive protein and anti-nuclear antibody test. A timely chest x-ray and neurological imaging studies are also needed. Lumbar puncture should also be considered if MRI results are negative.

Patients older than 40 years require a less aggressive investigation because of the greater likelihood of the aetiology being more benign in nature (eg, ischemic mononeuropathy, vasculopathy) due to conditions such as diabetes mellitus or hypertension.²

There has been one case report in the English literature of a 38-year-old man with an isolated ocular motility abnormality as presenting feature due to pontine tuberculoma, with the chest x-ray showing bilateral apical parenchymal infiltrates and consolidation and bilateral hilar lymphadenopathy where some reduction in the size of the tuberculoma after 1 month of treatment was noted.^{3 4}

Learning points

- ▶ In countries where tuberculosis is endemic, it should be suspected even in short duration illnesses.
- ▶ A simple investigation such as a chest x-ray, if performed immediately, can be very useful and life saving.
- ▶ Tuberculosis with neurological involvement, especially with short duration illness, can rapidly become fatal and treatment should be aggressive.

Competing interests None.

Patient consent Obtained.

REFERENCES

1. **Gupta RK**, Jena A, Singh AK, *et al*. Role of magnetic resonance (MR) in the diagnosis and management of intracranial tuberculomas. *AJNR* 1987;**8**:1149–50.
2. **Ehrenhaus MP**, Hajee ME. Abducens Nerve Palsy [Internet]. eMedicine from web MD, Medscape's Continually Updated Clinical Reference 2009 [Updated 2009, May 21]. Available from: <http://emedicine.medscape.com/article/1198383-overview> (accessed on 28 July 2011).
3. **Saxena R**, Menon V, Sinha A, *et al*. Pontine tuberculoma presenting with horizontal gaze palsy. *J Neuroophthalmol* 2006;**26**:276–8.
4. **Kent SJ**, Crowe SM, Yung A, *et al*. Tuberculous meningitis: a 30-year review. *Clin Infect Dis* 1993;**17**:987–94.

This pdf has been created automatically from the final edited text and images.

Copyright 2011 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit

<http://group.bmj.com/group/rights-licensing/permissions>.

BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Please cite this article as follows (you will need to access the article online to obtain the date of publication).

Undrakonda V, Umakanth S. Short duration respiratory illness with abducens palsy in a young man. *BMJ Case Reports* 2011;10.1136/bcr.07.2011.4470, date of publication

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow