Nocardia brasiliensis meningitis

Sir,

A 23 year old female agricultural worker presented with progressive visual loss of 6 months duration and intermittent mild headache of 2 months. On examination there was a marked reduction in visual acuity in both eyes with a 2/60 vision. Ophthalmoscopy showed changes consistent with a primary optic atrophy. There were no meningeal signs or other significant findings on systemic examination. Routine screening tests were normal and VDRL was negative. A lumbar puncture was done which showed a normal cerebrospinal fluid (CSF).

A provisional diagnosis of a demyelinating disorder was made and prednisolone was started at a dose of 40 mg per day. Six days later she developed a high grade fever with severe headache and vomiting. There were no meningeal signs and the sensorium was not clouded. A repeat lumbar puncture showed a cell count of 2,000/mm³ consisting of predominantly lymphocytes and a moderately low CSF sugar. The possibility of a viral meningitis was considered and the steroids were tapered off. However, 2 days later she developed meningeal signs and we opted to use a combination of intravenous penicillin, chloramphenicol and gentamicin though bacterial cultures remained sterile. Within 48 hours of starting these drugs there was considerable improvement in her clinical signs but in another 5 days they all recurred. At this stage computed tomography head scan was done which was normal. A repeat lumbar puncture continued to show a significant lymphocytic pleocytosis with moderately low sugar values.

In view of the atypical presentation a fungal culture was done from the last CSF sample. From this, a pure growth of Nocardia brasiliensis was obtained after 2 weeks of incubation on Sabouraud's dextrose agar. This was identified by the standard methods. The sulphonamides group of drugs are more frequently used in treatment of nocardiosis. Hence we chose to use a high dose co-trimoxazole infusion in a dose of 20 mg/kg of trimethoprim. She improved in 48 hours and this improvement persisted. We were able to change over after a week to an oral regime of the drug at the same high dose.

Nocardia brasiliensis is widespread in soil samples. Infections present predominantly as cutaneous or subcutaneous infections as mycetoma and lymphocutaneous diseases. Systemic and disseminated forms of infection have been sporadically reported. Pulmonary involvement is the commonest systemic manifestation. Involvement of the central nervous system mainly as a meningitis has to the best of our knowledge not been previously reported. This case also emphasizes the usefulness of a high dose of co-trimoxazole therapy for N. brasiliensis infections.

George K. Varghese
K. Ramachandra Bhat
P.G. Shivandanag
Departments of Medicine, Microbiology, Kasturba Medical College, Manipal 576 116, Karnataka, India

References