

# STREPTOCOCCUS PYOGENES MENINGITIS AFTER MYELOGRAPHY

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Sir,

Bacterial or chemical meningitis are rare complications of lumbar puncture performed for diagnostic, therapeutic or anaesthetic purposes.

The incidence of chemical meningitis after myelography reported by Mayher et al. was 0.05%; acute bacterial meningitis was not recorded in this series of 6,000 myelograms performed over a 10-year period<sup>1</sup>. We report the first case of *Streptococcus pyogenes* (group A beta-haemolytic streptococcus) meningitis following myelography.

A 63 year old retired engineer was admitted with a 24 hour history of weakness of the lower limbs. Six weeks previously, he had an influenza-like illness and interscapular backache. Examination revealed a sensory loss to all modalities at the level of his costal margin; bilateral upper motorneurone weakness and spasticity of the legs were found; anal tone was decreased and there was painful distension of the bladder. He was referred for urgent neurological assessment.

Myelography with tomography showed no abnormality. The cerebrospinal fluid (CSF) obtained at the time of myelograph was clear, colourless, at normal pressure; the white cell count was 78/cu mm (mostly lymphocytes), red cell count 5/cu mm, protein 2.96 g/l and glucose was normal. A diagnosis of transverse myelitis, possibly viral in origin, was made. He was treated with dexamethasone and his neurological condition improved.

Seven days after myelography he developed sudden onset of fever, disorientation, aphasia, marked neck rigidity and brisk reflexes in all limbs. He deteriorated rapidly and became unconscious with minimal response to painful stimuli and his breathing was irregular. The peripheral white cell count was  $41.0 \times 10^9/l$  with 90 neutrophils. A lumbar puncture was performed following a normal CT brain scan. The cerebrospinal fluid was yellow and cloudy, with a white cell count of 28,000/cu mm (mainly polymorphs). *Streptococcus pyogenes*, which was sensitive to penicillin and chloramphenicol, was cultured. He was treated with intravenous benzyl penicillin, 2 mega units six times daily and chloramphenicol 1 gram four times daily for 12 days. Subsequently he was given 500 mg penicillin V orally four times daily for a further four days. He made a significant clinical recovery and though 10 days later he developed a large sacral ulcer which became infected with *Streptococcus pyogenes* which necessitated further treatment with intravenous erythromycin lactobionate 1 gram four times daily for 2 weeks followed by oral therapy for a week. His pressure sore took two months to heal, at which time he had made a significant general and neurological recovery. He was discharged home, where he subsequently fully recovered.

Meningitis due to *Streptococcus pyogenes* is uncommon and occurs mostly in children<sup>3</sup>; ear, nose and throat infections, erysipelas, arthritis and trauma are predisposing factors. Various species of streptococci have been reported to cause meningitis following lumbar puncture<sup>3</sup>. The most likely source of infection is the colonised nasopharynx of the operator, or contaminated instruments and solutions used for injection where pseudomonas species, Gram-. negative enteric bacilli and *Staphylococcus aureus* were the causative organisms<sup>4</sup>.

Acute chemical meningitis may mimic acute bacterial meningitis<sup>5</sup>. Bacterial culture is necessary to make a definitive diagnosis. Postmyelography meningitis often occurs within the first 24 hours of the procedure but can occur between 12 hours and 10 days<sup>6</sup>. Lumbar puncture followed by CSF

examination and culture should •therefore, be performed in all cases of suspected meningitis.

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