

CASE REPORT

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SILENT MASTOIDITIS ASSOCIATED WITH PNEUMOCOCCAL MENINGITIS

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ABSTRACT

Streptococcus pneumoniae (*S pneumoniae*) can cause a wide spectrum of diseases which includes upper respiratory tract infection as well as more severe invasive disease such as meningitis. Meningitis may be caused by invasion of the organism through the blood brain barrier, either via haematological spread or from an adjacent focus of infection such as the ears. We describe two infants with pneumococcal meningitis and silent mastoiditis. They both presented with a classical history to suggest meningitis with no apparent focus of infection. A brain imaging was done in the first infant to look for the underlying cause of his focal seizure and in the second infant, to assess for complications of meningitis, as he had a slow recovery. While they did not have any clinical signs to point towards the diagnosis, they were both diagnosed to have acute mastoiditis from brain imaging. We would like to highlight the importance of brain imaging in excluding silent mastoiditis in infants with meningitis, particularly in those whose clinical course appears atypical.

Keywords: Pneumococcal Meningitis, Silent Otitis Media, Mastoiditis, Meningitis
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Introduction

Pneumococcal meningitis in children has approximately 8% mortality rate [1]. It can be caused by invasion of the organism through the blood brain barrier, which may be due to an anatomical defect or an adjacent primary focus, or through haematological spread. The most common primary focus of infection is the ear (30%), followed by the lung (18%), sinus (8%), others (2%), and in some, an unidentified primary focus (42%) [2].

Acute mastoiditis (AM) presents with either signs of acute otitis media (AOM) and local inflammatory findings over the mastoid area with radiological or surgical findings of mastoiditis [3,4]. AM is less prevalent in younger children below 6 months of age and is commonly preceded by upper respiratory infection and clear clinical signs suggestive of AM [5]. We report two

young infants with pneumococcal meningitis whose signs of AM were not clinically apparent, with one of the infants having been diagnosed with a rotavirus infection just prior to the diagnosis of pneumococcal meningitis.

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