Brief Reports

Mixed Bacterial Meningitis

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Pyogenic meningitis, a common pediatric problem, can be caused by a number of organisms(1). The commonest being *H. influenzae, Meningococcus and Pneumococcus.* Other organisms mainly isolated from neonates, include: hemolytic *Streptococcus* group B, *Staphylococcus aureus, Escherichia coli* and Salmonella. *Salmonella* meningitis, particularly *S. typhi* meningitis is uncommon in newborns. This prompted us to report a rare case of neonatal mixed bacterial meningitis involving *S. typhi* and *Pneumococcus*.

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Case Report

A 27-day-old female child presented with fever, history of head injury, tonic and clonic convulsions, uprolling of eye balls and altered sensorium. Examination revealed a swelling (7 cm × 5 cm) on left posterior lateral aspect of the skull. The patient had a small swelling since birth which increased in size following trauma diagnosed as cephalhematoma. The swelling was mobile, local temperature was not raised, fluctuation was positive and cough reflex was not elicited. There was no evidence of hemoglobinopathies.

Investigation revealed a hemoglobin of 10.5 g/dl, total count of 6500/cu cm ($N_{46}L_{50}M_4$), blood urea of 33 mg/dl and serum creatinine of 1.3 mg/dl. C-reactive protein and latex agglutination test were positive both in the blood and cerebrospinal fluid. Cerebrospinal fluid was turbid with 140 cells/cu mm (polymorphonuclear leucocytes 65%, lymphocytes 35%). CSF proteins were 470 mg/dl, globulin was increased and glucose was 30 mg/dl. Gram stain from centrifuged deposit showed Gram positive diplococci and the culture grew *S. typhi and Pneumococcus.* The *S. typhi* was sensitive to chloramphenicol.

The child was treated with ampicillin (50 mg 4 hourly IV), chloramphenicol (30 mg 6 hourly IV), and Injection Cefotaxime or Cefuroxine (62 mg, 6 hourly IV). Inspite of intensive management, the child expired.

Discussion

Salmonella meningitis in children has been reported frequently over the years(2). *Salmonella typhi* meningitis is comparatively rare(3-6) inspite of frequent occur-

rence of typhoid in India and the youngest case reported was 12 days old(7).

The isolation of pneumococcus alongwith *S. typhi* in our case might have occurred as complication of trauma, as pneumococcal meningitis occurs usually as a complication of middle ear disease, with or without mastoiditis. Prematurity and trauma were the factors leading to greater susceptibility of infection in this case. The isolation of two organisms in CSF of this neonate, especially *Salmonella typhi* with *pneumococcus,* is noteworthy.

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Pendred's Syndrome

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Congenital sensori-neural deafness in association with a goitre is termed as Pendred's syndrome(1). We are reporting such a patient whose goitre was apparent at birth and the diagnosis of sensori-neural hearing loss was accomplished using auditory evoked responses during the neonatal period.

Case Report

A 22-day-old, term, male child was born to a 33-year-old mother with Grade II untreated goitre. The family consumed iodized salt at home and no other family member had goitre.

The baby had been referred with the complaint of a swelling in the neck since birth (*Fig. 1*). There was history suggestive of constipation and a hoarse cry. There was no history of any difficulty in feeding or prolonged jaundice.

On examination, the child weighed 2.5 kg with a head circumference of 34 cm.

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