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Meningitis with Bilateral Acute Suppurative Otitis Media caused by Group A Streptococcus

Group A streptococcal (GAS) invasive disease has become increasingly common in recent years but meningitis caused by GAS is still relatively uncommon(1). Recently, severe and fulminant cases of Group A streptococcal meningitis have been reported(2) but it is rather an uncommon organism causing meningitis beyond neonatal period(3). We report a 10-year-old child with bilateral otitis media leading on to Group A streptococcal meningitis with a dramatically rapid course and fatal outcome. A previously healthy 10 year old boy with a past history of purulent ear discharge from the left ear was admitted to our hospital with the chief complaint of generalized headache and moderate to high grade fever for the last 10 days. Along with the headache he had four to five episodes of vomiting which were non-bilious and non-projectile during the last 5 days. He became lethargic and drowsy 2 hours prior to admission. However, there was no history of seizures, trauma, focal deficit or cyanosis.

On examination, the child was found to be drowsy, his pupils were of normal size and normally reacting to light. There was no cranial nerve or focal deficit. However, the plantar response was extensor and all the signs of meningeal irritation (neck rigidity, Kernig's and Brudzinski's sign) were present. On general physical examination he weighed 28 Kgs, his pulse rate was 72/minute, respiratory rate = 32/min and blood pressure was 130/70 mm Hg. Rest of the systemic examination was normal. His blood examination revealed hemoglobin of 10 gm%. Total leukocyte count was 25,400/mm^3 with 85% neutrophils and serum electrolytes were within normal limits (Na = 142 meq/L, K = 4.1 meq/L). Blood urea was 41 mg% and serum creatinine was 1 mg%. The liver function tests were within normal limits. The cerebrospinal fluid (CSF) examination revealed 3,200 WBCs/µL with 80% neutrophils, glucose 10 mg% against the blood glucose of 204 mg% and CSF protein was 210 mg%. Gram stained smear of CSF showed gram-positive cocci in chains. CSF culture grew b-hemolytic streptococci that was identified, as *Streptococcus pyogenes*, which was sensitive to penicillin, erythromycin, ciprofloxacin, vancomycin and ceftriaxone, although blood culture was sterile. The CT scan of the head could not be done due to lack of the facility in our hospital and unwillingness on the part of the attendants to get it from private setup. The child was diagnosed as pyogenic meningitis with raised intracranial tension but brain

abscess could not be ruled out in absence of CT scan. Accordingly, he was started on intravenous ceftriaxone 100 mg/kg in two divided doses and cloxacillin 200 mg/kg in four divided doses. All supportive measures were instituted to reduce his intra-cranial tension. There was no improvement in condition and after 36 hours of admission his condition deteriorated suddenly and he could not be revived. Streptococci other than *S. pneumoniae* are seldom found in acute bacterial meningitis cases(4). Meningitis due to *S. pyogenes* usually follows upper respiratory tract infection, otitis media, sinusitis or related to head injury cranial surgery(5). Our patient had untreated unilateral acute suppurative otitis media that might have acted as the focus and led on to purulent meningitis; CSF culture grew *S. pyogenes*. Thus suspicion for GAS meningitis should be borne in mind particularly if there is some other contiguous focus of infection such as otitis media, sinusitis, tonsillitis etc. which should be treated timely and appropriately to prevent complications.

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Thrombocytopenia Following MMR Vaccination

Serious adverse effects following MMR vaccination include Autism, Inflammatory Bowel Disease, Guillain Barre Syndrome, Thrombocytopenia, hypersensitivity reaction. Incidence of thrombocytopenia following MMR Vaccination is 0.5 to 33 cases / 1 million doses(1). In our case patient presented with bleeding tendency following MMR vaccination after 15 days. The sixteen months-old-male child came with petechial rash and spontaneous bruising over forehead and buttocks of 1 day duration and epistaxis of 15 minutes duration. The patient had received MMR vaccine 15 days prior with us. It was not