

of colloaterals is generally recommended, although right pneumonectomy also provides similar results(4).

Our patient responded for 6 weeks but then deteriorated and therefore was referred to cardio-thoracic center in Mumbai for further surgical management.

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### **Acute Transverse Myelitis Following Hepatitis E Virus Infection**

A 12-year-old girl presented with sudden onset weakness of both lower limbs for one day, associated with loss of bowel and bladder sensation, leading to overflow incontinence of urine. On examination the child was afebrile and vitals were stable. There was no pallor, icterus, clubbing, lymphadenopathy or edema. Spine was normal. The child was conscious and oriented. There was no cranial nerve involvement. At presentation, muscle tone of all the four limbs was reduced. But in the next 2 days muscle tone normalized. Power at the shoulder joints was 4/5 for all movements. Similarly for elbows it was 4/5 and for wrists and fingers 3/5. Power of all muscle groups of the lower limbs was 1/5. All deep tendon

reflexes turned brisk and abdominal reflex was not elicitable. Plantar reflex was extensor on both sides. Touch, pain, temperature and vibration sensations were decreased all through, from lower limbs till neck. Position sense could not be tested precisely. There were no cerebellar signs or signs of meningeal irritation. Cerebrospinal fluid microscopy and biochemistry were normal.

The child had a history of low-grade fever, anorexia and jaundice (suggestive of viral hepatitis) starting twenty days prior to admission. These symptoms had already resolved before the onset of weakness. Serology was positive for hepatitis E virus antibody (IgM anti HEV). It was negative for surface antigen for hepatitis B (HBsAg) and antibodies for hepatitis A (IgM anti HAV) and hepatitis C (anti HCV). IgM antibodies for measles, rubella and herpes simplex were also negative. Magnetic resonance imaging (MRI)

scan of the spine showed mild swelling of the cervical spinal cord and abnormal increased signal intensity within the cord parenchyma extending from cervical disc between 2nd and 3rd cervical vertebrae, up to just short of conus on TSE T2W and TRIM images. The periphery of the cord displayed isointense signal. Vertebral bodies, intervening discs and surrounding soft tissue were normal. Clinical picture and the MRI findings were suggestive of acute transverse myelitis. The child recovered spontaneously starting from the 5th day of admission and was discharged within 10 days. Methyl prednisolone was not used since symptoms started resolving very fast.

Hepatitis viruses are less commonly reported etiological agents for acute transverse myelitis. Transverse myelitis has been reported with hepatitis A(1), hepatitis B carrier state(2), hepatitis B vaccination(3) and chronic hepatitis C(4). Association with hepatitis E has not been reported earlier.

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#### Errors in Administration of Combination Antibiotics

Widespread use of  $\beta$ -lactams has led to development of resistant microorganisms because of production of  $\beta$ -lactamases(1,2). To overcome this problem,  $\beta$ -lactams have been combined with  $\beta$ -lactamase inhibitors. The spectrum of activity of each combination is determined by the  $\beta$  lactam. The addition of  $\beta$ -lactamase inhibitor does not decrease the dose of the  $\beta$ -lactam. The ratios of the antimicrobial drug and the enzyme inhibitor in various combinations are: (i) Amoxicillin-clavulanic acid 5 : 1 (in injectible); variable in

oral preparations; (ii) Piperacillin tazobactam 8 : 1; (iii) Cefoperazone-sulbactam 1 : 1; (iv) Ampicillin-sulbactam 2 : 1.

We have come across frequent errors in administration of these combinations. Taking the example of cefoperazone-sulbactam, an instruction is written for a 10 kg child as Inj cefoperazone-sulbactam 300 mg IV 8-hourly (to give 300 mg cefoperazone). The staff takes a vial labeled as 1 g (cefoperazone content 500 mg) and dilutes the same in 10 ml diluent and administers 3 mL. However, this will deliver only 150 mg of cefoperazone. The problem is more likely to occur in pediatric patients who will receive a fraction of the vial.