How good at neurology are you?

Answers

1. Paget’s disease.
He has cataracts and prostatic outflow obstruction, common pathologies in older people. However, his deafness and back pain are due to Paget’s disease. The X-ray shows a coarseness of the L2-4 vertebral bodies and blurring of the cortico-medullary junction. The bodies are also quite flat and there is thickening of the right border of L3.

Further Reading

2. Low CSF volume headache.
This pattern of diffuse meningeal enhancement following gadolinium injection is typical of low CSF volume headache. 90% of such cases can be picked up by this means. Other causes of meningeal enhancement, such as malignant infiltration or sarcoidosis, are more likely to give a nodular, rather than smooth, pattern.

Further Reading

3. Haemorrhage from renal angiomyolipoma in tuberous sclerosis. The CT shows subependymal periventricular calcification.
80% of tuberous sclerosis patients have renal angiomyolipomas (AMLs). They are benign hamartomas which are usually asymptomatic, unless they bleed. They may then present with acute abdominal pain, haematuria and hypovolaemic shock. Lesions tend not to bleed unless they are greater than 3.5 cm in diameter. Large AMLs may occasionally cause mechanical problems or renal failure through replacement of normal tissue. Most, but not all, AMLs have a high fat content, enabling them to be distinguished from the rarer renal cell carcinomas. The treatment of choice is percutaneous arterial embolisation, or conservative renal-sparing surgery.

Further Reading
Gomez MR Tuberous Sclerosis Complex. 3rd Ed

4. (a) A rapidly evolving, descending flaccid paralysis with autonomic features is typical of botulism, although there may be no autonomic features. Sudden respiratory paralysis and death may occur in very rapidly evolving cases. Botulism may result from ingestion of pre-formed toxin in food, from wound contamination with spores and subsequent production of toxin, or from intestinal colonisation with spores. There has recently been an increasing number of cases of wound botulism in injecting drug users in the UK, as reported by the UK Public Health Laboratory.

(b) Diagnosis is confirmed by identification of the toxin in blood, or the bacteria from wound specimens. Samples should be sent immediately to the reference laboratory. The bacterial load can be decreased by surgical debridement of any wound and antimicrobial therapy with benzyl penicillin and metronidazole. Early treatment with antitoxin helps neutralize any already produced toxin and reduces the severity of the illness.