Pulmonary puzzle

Answer

From the question on page 100

Immoassay for Treponema pallidum antibodies (TPAb ELISA) and the rapid plasma reagin test (RPR) performed at presentation were positive at high titres (1:16 and 1:128, respectively). TPAb were also detected in the cerebrospinal fluid (titre 1:128). T pallidum DNA-PCR of lung biopsy was not performed because of the poor specimen available.

Following the clinical and serological diagnosis of secondary syphilis with involvement of the central nervous system, intravenous ceftriaxone (2 g/day) was administered for 2 weeks because the patient reported allergy to penicillin. An unexpected and significant reduction in the major lung lesion was observed at the end of the antibiotic therapy and complete radiological disappearance of all pulmonary lesions had occurred at 3-month follow-up. TPAb and RPR titres both decreased to 1:8 after 3 months and RPR was negative at 6 months.

HIV/syphilis co-infection is associated with high rates of asymptomatic primary syphilis and with atypical features of secondary disease at presentation.1 Lung involvement is extremely rare during secondary syphilis and it has been described mainly in patients with tertiary stage of the disease.

David and colleagues2 recently reviewed nine cases published since 1967 which met the Coleman criteria for the diagnosis of secondary pulmonary syphilis (ie, physical findings of secondary syphilis, serological diagnosis, radiological lung abnormalities, exclusion of other forms of pulmonary disease and resolution of radiological abnormalities following anti-syphilis treatment).3 Interestingly, eight of the nine patients had single or multiple lesions at lower lung regions.2 Our patient with diagnosed secondary syphilis also had bibasilar lesions and alternative possible aetiologies for pulmonary lesions were excluded, both microbiologically and histologically. Even in the past when tertiary syphilis was not uncommon, one criterion to discriminate pulmonary syphilis from tuberculosis was the tendency of the former to attack the middle and lower lobes.4 One explanation for the prevalent involvement of the lower lobes during pulmonary syphilis may be ascribed to the high oxygen sensitivity of the microorganism due to the absence of microbial enzymes that detoxify reactive oxygen species.5 Despite its ability to spread in any tissue, T pallidum thus encounters an unfavourable environment in the lung. When pulmonary involvement occurs, it will conceivably take place in the less oxygenated area of the organ. The differential diagnosis for pulmonary nodules associated with cutaneous lesions includes a broad range of diseases (lymphoma, Kaposi sarcoma, metastatic malignancies, Wegener granulomatosis, sarcoidosis, mycobacteriosis, disseminated fungal infections and septic emboli); syphilis should also be added to the list.

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REFERENCES

Answer

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