

Images in medicine

A child with fever, cough and Lancisi's sign



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Image in medicine

An 8-year-old boy from a rural town in Chad was referred to the emergency department following a one-month history of fever, otitis media and left thigh osteoarthritis. Venous jugular examination showed prominent systolic pulsations, also called Lancisi's sign. A chest X-ray (A) showed a right pneumothorax, which was immediately drained, before incision and drainage of the left distal thigh osteoarthritis. A CT-scan showed multiple pulmonary abscesses (B). After transthoracic echocardiography (M-TurboTM, Sonosite® Inc, Bothwell, WA, USA), large vegetations were seen on the tricuspid valve (C) and right ventricular systolic pressure was elevated. There was severe tricuspid regurgitation. Microbiological analysis found methicillin-sensitive *Staphylococcus aureus* in blood cultures and bacteriological samples from the thigh. This case

demonstrates a presentation of right-sided endocarditis with septic pulmonary emboli (SPE) responsible for a right pneumothorax. Prominent systolic pulsations of the jugular veins, or Lancisi's sign, are a manifestation of severe tricuspid regurgitation. They result from a retrograde blood flow in the right atrium due to tricuspid incompetence during systole. Pneumothorax, secondary to SPE, is rare and *Staphylococci* are the infectious pathogens in all reported cases of secondary pneumothorax due to SPE, characterized by pulmonary inflammation with peripheral necrosis and multiple small cavities which involves the pleura; it may progress into the subpleural tissues or fistulize in situ. In this case, targeted antibacterial therapy was initiated until day 42. A rapid clinical improvement was observed. A follow-up transthoracic echocardiograph was performed at 3 months and revealed a reduction in vegetative growth and mild tricuspid regurgitation sequela.

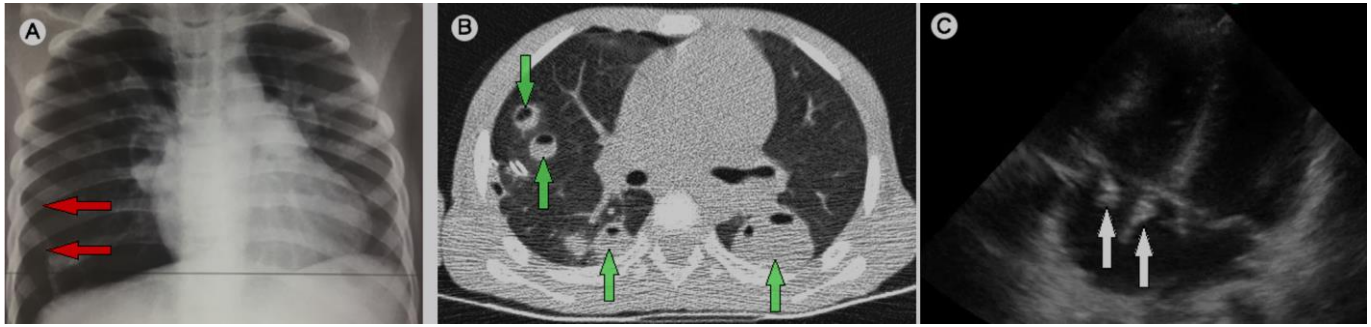


Figure 1: imaging findings in a right-sided endocarditis with spontaneous pneumothorax and septic pulmonary emboli: (A) chest radiograph at admission, showing a right-sided hemithoracic pneumothorax (red arrows) and a partially-collapsed right lung; (B) lung CT scan on day 1: multiple, differently-sized nodules with cavities in the left and right lungs (green arrows) indicative of septic pulmonary emboli; (C) an apical four-chamber-view transthoracic echocardiograph showing tricuspid valve vegetations in the right atrium during systole (white arrows)