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IMAGES IN PAEDIATRICS

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Gingivitis as probable source of a thoracic actinomycosis due to *Actinomyces israelii* and *Actinobacillus actinomycetemcomitans*

Actinomycosis is a chronic, granulomatous disease of cervicofacial (55%), abdominal (20%), or thoracic (15%) location caused by *Actinomyces israelii*.¹ It is often accompanied by copathogens such as *Actinobacillus actinomycetemcomitans*, which is also strongly associated with gingivitis.²

We report on a 9 year old boy who presented with a six week history of cough, weight loss, and malaise, but no fever. On physical examination he had right lower lobe dullness, and signs of gingivitis with tooth decay of the lower molars.

The erythrocyte sedimentation rate (ESR) was 110 mm, C reactive protein (CRP) 91 mg/l, leucocytes $14.7 \times 10^9/l$ with a left shift. Chest x ray examination showed right lower lobe consolidation with a pleural effusion; the pleural puncture was not diagnostic.

The patient improved on oral erythromycin; a follow up x ray examination showed regression of the initial findings. Six weeks later he was readmitted with a painful soft tissue swelling over the right latero-dorsal thorax. x Ray examination again showed right lower consolidation; bony destruction of one rib was suspected. An open biopsy of the swelling showed a chronic inflammatory process with pus containing Gram positive filiform rods resembling actinomycetes. Culture was positive for *A. israelii* and *A. actinomycetemcomitans*. Although these organisms were not recovered from a gingival culture, *A. actinomycetemcomitans* was shown in three of four gingival lesions using

Figure 1 Thoracic CT scan showing right sided pleural effusion with pulmonary consolidation and erosion of rib (arrow).

specific hybridisation probes (IAI-Pado-Test 4.5).² Postoperatively the patient became febrile. He made a full recovery with ampicillin/sulbactam for four weeks intravenously, followed by oral ampicillin/sulbactam for three months.

Actinomycosis is uncommon in Europe and can be mistaken for malignancy or other granulomatous or mixed anaerobic infections. Our patient probably aspirated the pathogens from his periodontal lesions.³ While *A. israelii* is susceptible to penicillin, tetracycline, erythromycin, and clindamycin in most cases, *A. actinomycetemcomitans* may be resistant,^{4,5} as observed in our patient. In summary, adequate diagnostic procedures, debridement, and prolonged antibiotic therapy may be life saving in severe actinomycotic infections.

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