

Cavitary Pulmonary Lesions Caused by *Actinomyces Odontolyticus* in the Presence of *Haemophilus Parainfluenza* Treated Successfully with Oral Antibiotics

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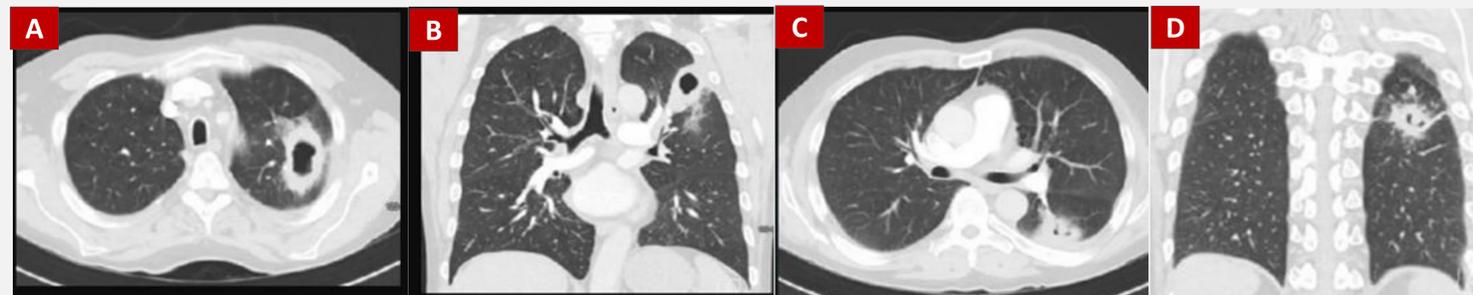
BACKGROUND

- Pulmonary actinomycosis (PA) due to *Actinomyces Odontolyticus* (AO) is exceedingly rare. The majority occurs in patients with underlying risk factors including chronic lung diseases, chronic immunosuppression, alcoholism, poor oral hygiene, malnutrition, and diabetes.
- Concurrent PA and *Haemophilus* (H) parainfluenza colonization/infection has not been reported to our knowledge.
- We present a rare case of AO in the presence of H. parainfluenza with cavitary pulmonary lesions, successfully treated with oral amoxicillin/clavulanic acid (ACA).

CASE PRESENTATION

- A 60-year-old male with a history of longstanding smoking, alcohol use disorder, and latent Tuberculosis (TB) presented with 3 weeks of small volume hemoptysis, shortness of breath, weight loss, and night sweats. He was afebrile with stable vital signs and on room air.
- CT chest demonstrated 6.1x5.2 and 3.7x3.6 cm cavitary lung lesions (figure 1).
- Intravenous ampicillin-sulbactam was initiated. Sputum samples grew H. Parainfluenza, and sputum acid fast stain was negative.

FIGURE 1: CT Chest on Presentation



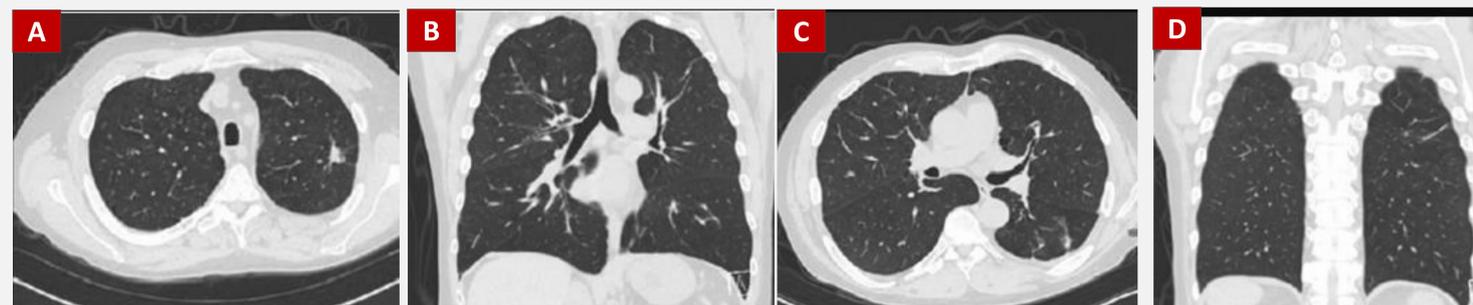
A&B cross sectional and coronal images of the left upper lobe cavitary lesion

C&D cross sectional and coronal images of the left lower lobe cavitary lesion

CASE COURSE

- Extensive microbiological and immunological work up were negative. Ampicillin-sulbactam was deescalated to amoxicillin/clavulanic acid two days later.
- Patient was discharged home on a 14-day course of amoxicillin/clavulanic acid, with post-course bronchoscopy with biopsy to rule out malignancy.
- Bronchoalveolar lavage was negative. Biopsies of the cavitary lesions were negative for malignancy but grew AO.
- The patient was continued on oral amoxicillin/clavulanic acid because he was improving. After receiving a total 16 weeks of ACA, he showed near-complete resolution of the cavitary lesions on CT. (Figure 2)

FIGURE 2: CT Chest after Treatment (6-month follow up)



A&B cross sectional and coronal images of the left upper lobe cavitary lesion

C&D cross sectional and coronal images of the left lower lobe cavitary lesion

DISCUSSION

- We report a rare case of PA caused by AO in the presence of H. parainfluenza in a patient with alcohol use disorder. It is not clear if pulmonary infection or colonization with H. Parainfluenza increased his risk for PA.
- In our patient, sputum and BAL cultures were negative for AO but tissue biopsy culture was positive, which raises the importance of sending tissue biopsy for culture in such cases.
- Current recommendations are to treat PA with penicillin injection for 4–6 weeks followed by oral penicillin for 6–12 months.
- We present successful resolution of PA with a 16-week oral course of amoxicillin/clavulanic acid.

CONCLUSIONS

- Early recognition and treatment of PA is essential to prevent misdiagnosis and disease progression.
- A trial of oral antibiotics is a reasonable option for mild to moderate PA cases with a close follow up to assess clinical and radiographic responses.

REFERENCES

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