

**AWARD FOR THE HIGHEST SCORE DURING THE ABSTRACT REVISION PROCESS FOR CASE REPORTS, 2nd PLACE:**

**20. BENEFITS OF PULMONARY LOBECTOMY IN INFECTION BY ACTINOMYCES**




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 <https://www.youtube.com/live/fSpXH-3Xy5w?t=19091s>

**BACKGROUND:** Pulmonary actinomycosis is an uncommon disease with a non-specific clinical presentation, which makes difficult its diagnosis and usually leads to a misinterpretation of malignancy rather than infection. **THE CASE:** A 30-year-old female patient with no relevant history, who began her illness a year and a half ago with cough, chest pain, weakness, and hemoptysis. She received medical treatment, however, the episodes of hemoptysis persisted, so it was decided to take samples for KOH test and acid-fast stain, both of which were negative, and a simple computed tomography scan was performed, in which bronchiectasis was found in the posterior basal segment of the right lung. Afterwards, blood tests were done, showing mild leukocytosis (Table 1). Bronchoscopy was performed, where a mass was found, and a biopsy was taken. Subsequently, squamous metaplasia and sulphur granules with dystrophic calcification were observed, leading to a diagnosis of pulmonary actinomycosis. Treatment with amoxicillin was given for 12 months.

Three months later, she persisted with occasional hemoptysis, so it was decided to perform a right lung lobectomy, showing clinical improvement. Six months later, the symptoms improved completely. **CONCLUSION:** This condition used to be fatal, however, since the development of penicillin, its incidence has decreased drastically to the point that only 94 cases were reported in the first decade of the 21st century, therefore it is unlikely to be considered among the differential diagnoses. In addition to this, it is a great mimic of malignancy, being misdiagnosed as a pulmonary neoplasm. The definitive diagnosis is based on the finding of sulfur granules. The most used treatment is penicillin for 6 to 12 months and, in case of persistence or recurrence of symptoms, it can be complemented with surgical treatment, which has shown positive results. It is important to consider it among the differential diagnoses in patients with non-specific symptoms and a negative result for the most common pathogens.

**Table:** Blood Test Results for the Evaluation of a Patient with Pulmonary Actinomycosis.

Paraclinical report	Value	Normal value
Leukocytes (cells/mm3)	10,300	4,000 – 10,000
Platelets (cells/mm3)	238,000	150,000 – 400,000
Glucose (mg/dl)	96.3	70 - 99
Sodium (mEq/l)	137	135 – 145
Potassium (mEq/l)	3.3	3.5 - 5

**Key Words:** Actinomycosis, cardiothoracic surgery, penicillin, case report.