Empyema due to *Aggregatibacter aphrophilus* and *Parvimonas micra* Coinfection

**Empiema secundario a coinfección por Aggregatibacter aphrophilus y Parvimonas micra**

*Aggregatibacter aphrophilus*, formerly known as *Haemophilus aphrophilus*, is a facultative anaerobic Gram-negative coccobacillus that forms part of the oropharyngeal flora. Although it is not highly pathogenic, it has been associated with infections, such as endocarditis, cerebral abscesses, bone and joint infections, and endophthalmitis. Pleuropulmonary involvement, however, remains exceptional. Another common commensal of the oropharyngeal cavity is *Parvimonas micra*, formerly *Peptostreptococcus micros*, a strictly anaerobic Gram-positive coccus that has been associated with polymicrobial infections (intracranial abscesses, paranasal sinus infections, periodontitis and septic embolism). Reports of *P. micra* as a pathogen in lung infections are exceedingly rare. We report the first case of pleural empyema due to *A. aphrophilus* and *P. micra* coinfection.

A 49-year-old man was admitted with a 4-day history of dyspnea, cough with purulent expectoration and fever. In the previous 3 months, he had suffered asthenia and anorexia and had lost 12 kg in weight. He was a habitual smoker (1 pack-year) and his alcohol intake was 80 g ethanol/day. He had no other comorbidities. On physical examination, temperature was 37.4 °C, hyperventilation in the lower half of the right hemithorax on lung auscultation, and poor oral hygiene, with extensive caries and evidence of periodontitis. Clinical laboratory results revealed a white blood cell}

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Fig. 1. (a) Upper and lower right lobe infiltrates and pleural effusion; (b) right lower lobe atelectasis with pleural effusion.

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count of $13.6 \times 10^9/\text{l}$ (normal values $[NV]$: $4–11.5 \times 10^9/\text{l}$) with neutrophilia, hemoglobin $10.4 \text{g/dl} (NV: 13–18 \text{g/dl})$ and hematocrit $32.8\% (NV: 41\%–50\%)$, $959 \times 10^9/\text{l} (NV: 130–450 \times 10^9/\text{l})$ platelets and erythrocyte sedimentation rate (ESR) $110 \text{mm/h} (NV: <20 \text{mm})$.

Chest X-ray on admission showed parenchymal infiltrations in the posterior segment of the right upper lobe and apical region of the right lower lobe, with loss of volume and right pleural effusion (Fig. 1a). Thoracocentesis was performed, and purulent fluid was obtained that was sent for culture. Wide-spectrum antibiotic treatment with linezolid and imipenem began and a chest tube was placed, to which fibrinolitics were added: $1500 \text{cc}$ of purulent fluid was drained. Chest computed tomography (CT) was performed (Fig. 1b), showing pulmonary infiltrate, pleural and aplectasis of the lung. Mixed flora were identified on a direct Gram stain of the specimen. Culture of the pleural fluid was positive for $A. aphrophilus$ and $P. micra$, as identified by mass spectrometry (MALDI-TOF).

On the basis of these results, the antibiotic treatment was scaled down to amoxicillin–clavulanate, which continued for 4 weeks. The patient’s progress was satisfactory with clear improvement of the clinical picture.

Pleuropulmonary infections by $A. aphrophilus$ are uncommon; indeed, since 1965 only 3 cases have been reported. Our case is particularly unusual, due to the concomitant isolation of $P. micra$: an extensive search of the literature revealed only 1 case in which this microorganism was described as a causative agent of empyema. This is the first report of such a case in Spain.

The initial presentation, radiological pattern and clinical course of our case are indistinguishable from infections caused by other microorganisms. The patient had a history of general decline over several months, along with predisposing factors, such as alcohol abuse and periodontal disease. He responded to standard antibiotic treatment, chest drainage and fibrinolitics.

To conclude, although $A. aphrophilus$ and $P. micra$ may be exceptional, they should be considered as causative agents of pleural infection, particularly in patients with risk factors. The presentation, clinical management and clinical course were no different from empyema caused by more common microorganisms.

References


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Intrathoracic Schwannoma of the Vagus Nerve

Schwannoma intratorácico del nervio vago

We report the case of patient diagnosed with intrathoracic vagus nerve schwannoma. Vagus nerve schwannomas are highly unusual. In the last 40 years, 30 cases at most have been reported, of which only 2 have been published in Spanish.

A 74-year-old woman, with no significant clinical history, presented with clinical symptoms of dry cough, asthenia and dyspnea on minimal exertion. Standard chest X-ray showed mediastinal widening, so a computed tomography (CT) was performed, revealing a posterior, retrovascular, paratracheal mass in the mediastinum measuring $9.3 \text{cm} \times 4.3 \text{cm}$ (Fig. 1A) extending to the carina, causing substantial dilation and right shift of the esophagus, but with no evidence of stenosis. The mediastinal mass showed pathological uptake on positron emission tomography (SUV 7.57). Endoscopic ultrasound revealed a well-defined hypoechoic lesion, containing heterogeneous areas, $30 \text{cm}$ from the dental arch, protruding into the submucosa. Fine needle aspirination was performed, but the specimen was insufficient for diagnosis.

Fiberoptic bronchoscopy/endobronchial ultrasound showed extrinsic posterior compression of the trachea and carina, with no infiltration. Results from ultrasound-assisted biopsy confirmed fusocellular tumor, with low-grade malignant cytology, immunohistochemical study positive for S100, and negative CD34 and CD117.

A right posterolateral thoracotomy was performed, and a 10-cm tumor was found in the posterior mediastinum, adhering closely to the supracarinal esophagus, which was severely dilated (Fig. 1B). During resection of the tumor, the tracheal membrane was torn and repaired by suturing. In view of the close adhesion of the tumor to the esophagus, the mucosa was left exposed, so a $9 \text{cm} \times 4 \text{cm}$ portion of the esophagus had to be resected en bloque with the tumor. The esophageal defect was repaired with separate sutures in the mucous membrane and the muscle layer. The vagus nerve could be preserved, although this was not a significant consideration in our surgical strategy. An esophageal transit study did not reveal any extravasation of contrast medium or difficulty in passage.

Diagnosis from the pathology laboratory was schwannoma extending to the tunica adventitia of the esophagus with no infiltration of the muscle layer. Surgical borders were completely free of disease.

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