



Images in medicine

Post-traumatic pneumoparotid

Neumoparótida postraumática



Saúl Astray-Gómez^{a,*}, Inés Tortajada-Torralba^a, Germán Martín-Viguer^a, Ignacio Llópez-Carratalá^a,
María Antonia Marcos-Peña^a and Miguel Armengot-Carceller^{a,b}

^a Hospital Universitari i Politecnic La Fe, Valencia, Spain

^b Universitat de Valencia, Valencia, Spain

An 80-year-old anticoagulated woman presented to the Emergency Department with craniofacial contusion following an accidental fall. Physical examination revealed a left laterocervical ecchymosis and crepitus on palpation of the ipsilateral parotid gland, without signs of inflammation. Computed tomography (CT) in axial (Fig. 1A) and coronal plane (Fig. 1B) demonstrated a stable fracture of the posterior arch of the atlas, as well as multiple air bubbles within the left parapharyngeal space and parotid parenchyma (white arrow in Fig. 1A and Fig. 1B), without inflammatory changes. These findings were consistent with pneumoparotid. The fracture was managed conservatively with cervical immobilization. Prophylactic antibiotics were administered for the emphysema. Follow-up CT at three weeks confirmed complete resolution (Fig. 1C).

Pneumoparotid is a rare clinical entity characterized by the presence of air within the parotid gland. The main pathophysiological mechanism appears to be an increase in intraoral pressure exceeding the protective capacity of Stensen's duct, resulting in retrograde airflow. Anatomical factors, such as patulous ducts, buccinator weakness, or masseter hypertrophy, may predispose or facilitate this condition.

In the acute trauma setting, the differential diagnosis of a laterocervical swelling should focus on excluding active bleeding or hematoma with potential compromise of venous return or airway patency. Given its benign nature and limited clinical significance, pneumoparotid generally requires only symptomatic management and prophylactic antibiotic therapy to prevent secondary infection.



Figure 1. Cervical HRCT. A, B. Multiple air bubbles are observed within the glandular parenchyma and the parapharyngeal space (white arrow), in the absence of radiological signs of acute inflammation. These findings are consistent with pneumoparotid. C. Follow-up HRCT after three weeks showed complete resolution of these images.

* Corresponding author at: San Vicente Mártir Street 184, door 46 (46007), Valencia, Spain.
E-mail address: saulastray@gmail.com (S. Astray-Gómez).

Authorship

All authors had access to the data and played a role in writing this manuscript.

Conflicts of interest

All authors have no conflicts of interest to declare.

Compliance with ethical standards

All procedures were in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Declaration of 1975, and revised in 1983. Written informed consent of the patient was obtained for the publication of the images.

Fundings

No specific fundings were received from any bodies in the public, commercial or non-profit sectors to carry out the work described in this article.