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Clinical Image

[Translated article] Acute Mediastinitis due to Spontaneous Rupture of a Thyroid Cyst

Mediastinitis aguda por rotura espontánea de quiste tiroideo

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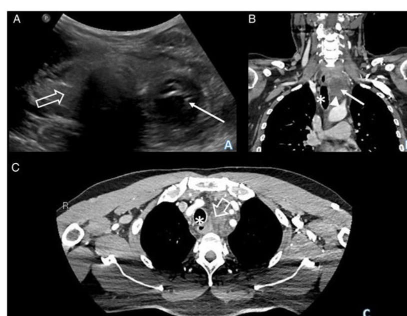

Fig. 1. (A) B-mode neck ultrasound showing the thyroid gland (empty arrow) with a cystic lesion containing septations and mobile echoes on the left lobe (thin arrow). (B and C) Cervico-thoracic CT with intravenous contrast in coronal (B) and axial (C) planes. A formation of cystic density is seen on the lower pole of the left thyroid lobe, with intrathoracic extension (fine arrow), causing the trachea (asterisks) and esophagus to shift to the right, with parietal thickening of the trachea (asterisks). Disruption of the wall is observed at the caudal-most margin of the cystic lesion (arrowhead), probably associated with the rupture. Increased density of upper mediastinal fat, and lymphadenopathies (empty arrow), suggestive of mediastinal inflammatory changes are also seen.

A 63-year-old patient with a history of upper gastrointestinal bleeding due to NSAIDs presented with a few days' history of cough and dyspnea, with no fever. He reported pain on cervical palpation, and acute phase reactants were significantly elevated.

Computed tomography (CT) angiogram was requested for the assessment of pulmonary arteries due to suspected pulmonary thromboembolism, but only mediastinal inflammatory changes were observed.

The study was completed with ultrasound and contrast-enhanced cervical CT, revealing a cystic formation with intrathoracic extension on the left thyroid lobe (Fig. 1A), with mobile internal echoes and septations, irregular hyperdense walls on CT, and disruption of the caudal-most gradient (Fig. 1B). Increased density of upper mediastinal fat and reactive lymphadenopathies were also observed (Fig. 1C). These findings suggested complicated thyroid cyst with rupture and signs of secondary mediastinitis.

Urgent surgery was performed with cervicotomy, debridement, and left hemithyroidectomy, and piperacillin–tazobactam and linezolid were started. The pathology report confirmed the presence of a complicated thyroid cyst rupture with necrotic remains and acute inflammatory infiltrate.

Our case illustrates a cause of acute mediastinitis not described to date: spontaneous rupture of a thyroid cyst. Although cases resulting from as a complication of ablation or thyroid biopsy have been published,[1,2] mediastinitis due to spontaneous rupture without prior manipulation has not been previously reported.

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