Cervical Hematoma Secondary to Spontaneous Rupture of a Thyroid Nodule

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Abstract

We present a case of intrathyroid hemorrhage of a thyroid nodule which presented as a progressive cervical mass associated with anterior neck discomfort, anterior neck malaise, dysphagia and mild dyspnea which was controlled with rest. Ultrasound and CT scan allowed diagnosis and staging.

CASE PRESENTATION

A 44-year-old male with a known thyroid nodule, and gastroesophageal reflux disease (GERD) arrived to the Emergency Room with a right-sided cervical tumor with pain, dysphagia and mild respiratory difficulties (Figure 1). Symptoms and signs appeared while the patient was performing his regular weightlifting. Physical examination showed a difficulty swallowing afebrile, eupneic and stable patient. On neck exam, an anterior cervical mass was palpated, predominantly on the right side with upward shift with swallowing. No ecchymosis or crepitation was noticed. Lab tests showed: Hemoglobin 13.5 g/dL. Coagulation profile serum chemistries and thyroid function were unremarkable. An urgent cervical ultrasound revealed a subcapsular thyroid hematoma (Figure 2). Further staging with a cervicothoracic CT scan with and without IV contrast confirmed the diagnosis of subcapsular hematoma secondary to a hemorrhagic thyroid nodule (Figure 3).

Figure 1 Spontaneous anterior cervical hematoma in a 54-year-old patient.

Figure 2 Thyroid ultrasound. A) Increase of the size of the gland with subcapsular thyroid hematoma, shown as a mass with hypoechogenic areas, most evident in low right thyroid lobe of. B) Healthy thyroid tissue. C) Traqueal deviation caused by the hematoma.

Figure 3 Cervicothoracic Scan. A) Subcapsular hematoma of the right thyroid lobe, most evident in the lower pole. B) Healthy thyroid tissues with an intact thyroid lobe. C) Left displacement of the traqueal.
The patient was placed on observation. The size of hematoma decreased and the patient was discharged on the 3rd day.

**DISCUSSION**

The first cervical hematoma secondary to an extracapsular hemorrhage of the thyroid was diagnosed by Capps in 1934. The patient was a 50-year-old female who died of acute dyspnea and dysphagia. An autopsy showed a cervicothoracic hematoma due to a parathyroid hemorrhage [1,2]. In 1981 Jordan diagnosed a similar case [3]. Intranodular hemorrhage of the thyroid gland is rare, usually limited to the gland and in most cases secondary to hemodynamic changes in the setting of hemodialysis and the use of Heparin or warfarin [4]. Trauma or maneuvers that increase the intravascular pressure, like cough and Valsalva maneuver are other causes. The most plausible explanation of the thyroid hemorrhage is physical activity and possibly venous bleeding due to the increase of intravascular pressure. The thyroid nodules are vascularized by small lobular arteries with large blood vessels and arteriovenous fistulae [5]. Those features explain the susceptibility to bleeding upon physical activity. There no clear explanation of a spontaneous hemorrhage in a thyroid nodule. Some authors try to explain the increase of the intravascular pressure due to certain maneuvers like Valsalva maneuver while many cases lack a triggering event. Clinically the cervical hematoma secondary to a thyroid hemorrhage presents with spontaneous cervical pain or dysphagia. The management depends on the patient’s general condition. If the patient is stable clinically, the best treatment is rest and deferred surgery. This would allow time for a better preoperative preparation and also would give time for reabsorption of the hematoma before surgery. Dyspnea and dysphonia are indications for a surgical intervention according to Massard & Roma. The lack of severe respiratory compromise in our patient allowed deferring surgery, which finally was deemed unnecessary [6,7].

**CONCLUSION**

Spontaneous cervical hematoma of thyroid gland can be conservatively managed, although acute clinical manifestations such as sever dyspnea or dysphagia may require urgent surgical intervention. To Image studies like cervical ultrasound and cervicothoracic CT scan establish the diagnosis, allow differential diagnosis and stage extension for management.

**REFERENCES**