CASE REPORT

Diffuse hematoma caused by spontaneous rupture of a parathyroid adenoma: a case report

Hematoma difuso causado por ruptura espontânea de adenoma de paratireoide: relato de caso

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Introduction

A diffuse cervical hematoma attributable to spontaneous rupture of a parathyroid adenoma is uncommon. Although most such patients are hemodynamically stable, all of serious hemorrhage, dyspnea, and death are possible. In the present paper, we report a case of a diffuse cervical hematoma caused by spontaneous rupture of a parathyroid adenoma. Parathyroid adenomectomy was performed after the hematoma became absorbed after a period of normal breathing. We found that the bleeding expanded readily due to the absence of a protective anatomical barrier (muscles or ligaments) around the thin parathyroid membrane.

Case report

A 61-year-old female presented to our otorhinolaryngological department 2 days after an ultrasonographic thyroid check-up, with progressive, prominent diffuse neck ecchymosis and mild dyspnea. She also exhibited odynophagia, hoarseness, and a slight fever. The butterfly-shaped ecchymosis extended from the upper neck to the nipple. There was no history of trauma, invasive manipulation, or infection.

Ultrasonography revealed a 39.3 × 24.5 × 20 mm-sized hypoechoic area in the upper pole of the left-side thyroid gland where a clear-edged 36 × 18 × 12 mm hypoechoic area had been noted prior to the onset of illness. Laryngoscopy revealed an extensive submucosal hemorrhage extending from the nasopharynx to the hypopharynx and trachea (Fig. 1). Magnetic Resonance Imaging (MRI) yielded an abnormal irregular signal within the subcutaneous tissue and the inter- and intra-muscular spaces, extending from the posterior pharyngeal wall into the posterior mediastinum, with compression of the trachea and esophagus (Fig. 2). [99mTc] pertechnetate scintigraphy did not evidence any parathyroid gland involvement, but a low-density lesion 33.2 × 16.5 mm in size was found in the dorsal region of

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An extensive submucosal hemorrhage. (A) The nasopharynx; (B) the larynx and hypopharynx.

Figure 2 Sagittal magnetic resonance imagery revealed an abnormal irregular signal extending from the second cervical vertebra to the posterior mediastinum.

Figure 3 Single-photon emission computed tomography scans revealed a left-side parathyroid gland adenoma.

Cervical hemorrhage may be caused by subacute thyroiditis, dissection of an aortic aneurysm, a penetrating aortic

Discussion

Cervical hemorrhage may be caused by subacute thyroiditis, dissection of an aortic aneurysm, a penetrating aortic
Conservative therapy was successful when used to treat the acute phase of the present condition; a similar result has been reported by van den Broek et al.\textsuperscript{5}; the cited authors surgically excised the tumor after bleeding had stopped, to avoid recurrence of hemorrhage. No well-accepted guideline for the optimal timing of surgery exists. Chaffanjon suggested that surgery 3 months after the development of hemorrhage is optimal if the anatomical structure is clear.\textsuperscript{6} Delayed surgery may reduce the risk of surgical complications, such as incomplete tumor excision and injury to the recurrent laryngeal nerve. In our case, we performed surgery after the hematoma had become resorbed to some extent, at which time the anatomical structure was sufficiently clear to allow us to avoid complications.

A diffuse hematoma attributable to spontaneous rupture of a parathyroid adenoma is rare, but, in our experience, should be strongly suspected if a patient presents with a combination of symptoms (pain, dysphagia, dyspnea, a cervical mass, and ecchymosis); a parathyroid adenoma; and no history of trauma or surgery. Conservative therapy is appropriate in the acute phase in which the timing of a later operation is determined by the condition of the patient.

**Conclusion**

We recommend that possible spontaneous rupture of a parathyroid adenoma should be suspected if a patient presents with a non-traumatic cervical hemorrhage.

**Conflicts of interest**

The authors declare no conflicts of interest.

**References**


