Answer

Cystic Parathyroid Adenoma

The first parathyroid cyst was described by Sandstrom[1] in 1880, with the first successful resection by Goris[2] in 1905. De Quervain[3] soon followed in 1925 with a resection of a mediastinal parathyroid cyst. Greene et al[4] performed a surgical excision of the first functioning parathyroid cyst in 1952. Parathyroid cysts are uncommon lesions of the neck and superior mediastinum. The incidence of parathyroid cysts found at autopsy ranges from 40% to 50%, and fewer than 200 clinical cases have been previously described in the literature.[5] They are most commonly found in women between 20 and 60 years of age and are often mistakenly diagnosed as thyroid cysts. Macroscopic cysts of the parathyroid glands greater than 1 cm in diameter are referred to as parathyroid cysts and necessitate clinical investigation. Parathyroid cysts vary in size, ranging from 1 to 10 cm, with the average measuring 3 to 5 cm. In 85% of cases, they are located in the neck and involve the inferior parathyroid glands. However, 15% of parathyroid cysts have been found to be completely within the mediastinum. They typically manifest as asymptomatic neck swelling but may present as a mediastinal mass. Nevertheless, cases of airway compromise, dysphagia, recurrent laryngeal nerve palsy, and innominate vein thrombosis attributable to large cysts have been described.[6] Cysts that are associated with hypercalcemia are classified as functional cysts and constitute only 15% of cases. Nonfunctional cysts are 2.5 times more common in women than in men, and functional cysts are 1.6 times more common in men than in women. The pathogenesis of cystic parathyroid adenomas is poorly understood. A likely explanation is degeneration of an existing parathyroid adenoma secondary to hemorrhage into the adenoma, resulting in cyst formation. The hemorrhagic degeneration theory may explain why most of these cysts are nonfunctioning at diagnosis, as the vascular event may lead to necrosis and degeneration of the adenoma and destroy sufficient viable adenoma tissue to prevent problems with calcium homeostasis. Most cystic parathyroid adenomas are treated by surgical excision via cervical or mediastinal exploration to restore calcium homeostasis. Other modalities of therapy such as aspiration and sclerosing agents have been tried, with varying degrees of success.[7]

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