FUNCTIONAL PARATHYROID CYST: A RARE CAUSE OF HYPERCALCEMIA

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BACKGROUND

➢Primary hyperparathyroidism (PHPT) is usually caused by single adenoma. Functional parathyroid cysts are a rare cause of PHPT.

➢Parathyroid cysts can be subdivided into nonfunctional, without biochemical derangement, or functional, with elevated serum calcium accompanying clinical evidence of hyperparathyroidism. Parathyroid cysts are found in the neck and anterior mediastinum.

➢ Functional parathyroid cysts are not only secretary, larger cysts can lead to compression symptoms, including dysphagia, dyspnea, cough, stridor and hoarseness.

➢Mediastinal parathyroid cysts are usually presented as asymptomatic and identified accidentally by a routine chest X-ray or computed tomography (CT).

➢We present a case of a patient with a functional parathyroid cyst.

CASE

➢ A 66-year-old male patient referred to our department because of hypercalcemia and anterior mediastinal mass determined on thorax CT which is performed due to pulmoner suspicion of pulmonary embolism.

➢He had no symptom of hypercalcemia except history of nephrolithiasis. Biochemical test revealed hypercalcemia (12.24 mg/dl; normal range:8.8–10.2), and hyperparathyroidism (parathyroid hormone level 140.6 pg/ml; normal range:15–65), also phosphorus level was 2.98 mg/dl (normal range:2.5–4.5), creatine 0.84 mg/dl (0,7–1,2), vitamin D level was 11.4 mg/L and 24-hour urinary calcium excretion was 504 mg/day.

➢ Renal ultrasonography determined 7 mm renal stone in the left kidney. Bone mineral dansitometry revealed osteopenia.

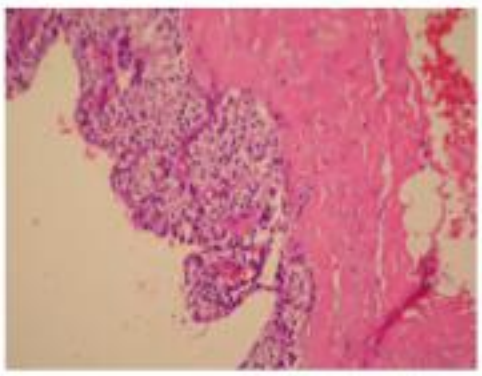
➢Thorax CT scan revealed a 4.7×3.3 cm sized solid mass, located on anterior mediastinum.

➢After initiating of adequate hidration and furosemide treatment for hypercalcemia, the patient referred to chest and chest surgery department because of the anterior mediastinal mass and pulmonary embolism detected on thorax CT.

➢The surgery decision was made because of the CT mass appearance. After removal of the mass calcium and parathyroid levels were reduced to normal levels. Pathologic examination revealed the diagnosis of a parathyroid cystic.

Picture 1. Torax CT of the patient

Picture 2. Pathology specimen of the patient



CONCLUSION

➢ Mediastinal parathyroid cyst is an uncommon cause for hypercalcemia. Also it is difficult to establish a preoperative definitive diagnosis.