

Parathyroid Cysts - An Unusual Cause for Primary Hyperparathyroidism

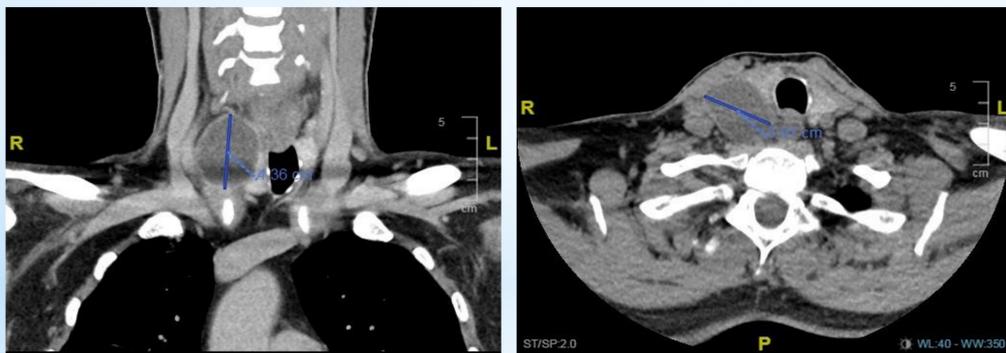
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Patient 1

- 50 ♂ - Incidental finding of raised calcium

	Calcium	Phosphate	PTH	Vit D
	3.52mmol/L	0.66mmol/L	99.5pmol/L	46nmol/L
Normal	2.2-2.6	0.8-1.5	1.6-7.5	

- Ultrasound neck - 1.2x1.5cm left sided nodule and 3.3x3.2x1.7cm right sided cystic mass
- Isotope MIBI negative
- Left nodule removed
 - Histology - thyroid nodule and normal parathyroid gland
- Recurrent severe hypercalcaemia with AKI
- Right sided lesion re-visited



CT images of cystic neck lesion

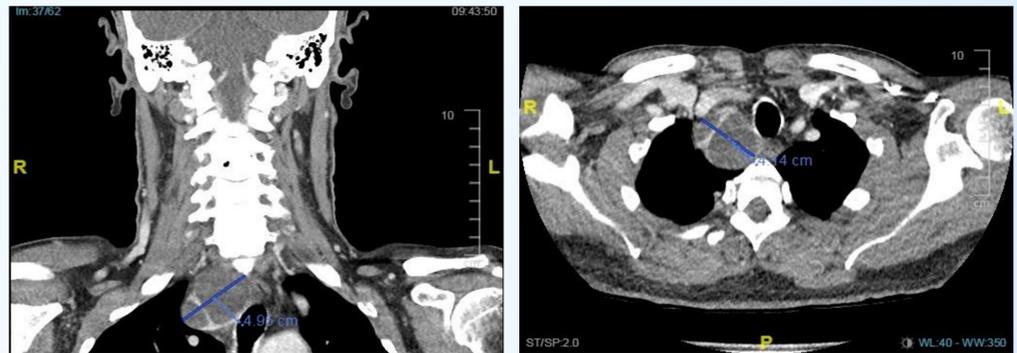
- Cyst fluid aspirated and sent for PTH analysis
 - PTH > 200pmol/L
- Right sided lesion removed
 - Histology - Parathyroid adenoma with cystic degeneration
- Hypercalcaemia resolved

Patient 2

- 73 ♂ - Incidental finding of raised calcium

	Calcium	Phosphate	PTH	Vit D
	2.79mmol/L	0.50mmol/L	30.0pmol/L	28nmol/L
Normal	2.2-2.6	0.8-1.5	1.6-7.5	

- Asymptomatic but serial rise on monitoring
- Ultrasound neck - 3.5x4.4cm right sided cyst
- Isotope MIBI scan normal
- DEXA normal



CT images of septated cystic neck lesion

- Cyst fluid aspirated and sent for PTH analysis
 - PTH >200pmol/L
- Awaiting surgical removal

Key Learning Point

If your patient has primary hyperparathyroidism with a cystic neck mass, consider aspirating it and send fluid for PTH analysis.

Parathyroid Cysts

First described in 1880

Around 300 cases reported

Rare: 0.5-1% of parathyroid lesions are cysts. Of these, only 10-15% functional

Can present with incidental neck lump or primary hyperparathyroidism

Only 29% positively identified on isotope MIBI scan - not sensitive for cysts

Key to diagnosis is markedly raised PTH in aspirated fluid

Treatments for non-functional cyst include aspiration or ethanol ablation

Definitive treatment for functional cyst is surgical excision - indication same as hyperparathyroidism

Malignant transformation rare

References

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- Pontikides N, Karras S, Kaprara A, et al. Diagnostic and therapeutic review of cystic parathyroid lesions. Hormones (Athens) 2012; 11:410.
- Cappelli C, Rotondi M, Pirola I, et al. Prevalence of parathyroid cysts by neck ultrasound scan in unselected patients. J Endocrinol Invest 2009; 32:357.