Interesting cases from a new surgical parathyroid service – a review of the first 50 cases.

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Background:

Primary hyperparathyroidism is definitively cured with surgery. Parathyroid adenoma localisation however, can be variable and challenging.

Objectives:

To impart interesting cases from a new surgical parathyroid service within a district general hospital.

Methods:

A retrospective review of our first 50 patients who underwent parathyroidectomy for primary hyperparathyroidism, to highlight interesting cases.

Results:

6 cases of interest were identified.

These include:

- **2 cases of intrathyroidal parathyroid adenoma; one of which was within a large thyroid cyst**
- Both of the intrathyroidal adenomas were localised to the same quadrant on US and SPECT imaging and were also located within the corresponding quadrant intraoperatively, albeit within the thyroid gland.
- **2 cases of parathyroid adenoma with concurrent papillary thyroid carcinoma**
-Both found to have abnormal thyroid nodules intraoperatively which were biopsied
- **1 case of double adenoma**
-Bilateral positive adenomas on US and unilateral on SPECT. Bilateral adenomas suspected intraoperatively and sent for frozen section.
- **1 negative exploration in a patient with severe hypercalcaemia and positive localisation studies**
-Underwent repeat US and Sestamibi and was found to have right lower parathyroid adenoma and had re-exploration.

Discussion:

The occurrence of ectopic parathyroid adenomas is not uncommon (3-4% of all parathyroid adenomas). The majority of ectopic parathyroid adenomas are located near the thymus, but can present as high cervical 1% (undescended), within carotid sheath 4%, intra-thyroidal 10%, paraoesophageal 60% and elsewhere within the mediastinum.

PET-CT imaging can be helpful in ectopic parathyroid adenoma localisation.

Intraoperative frozen sections and serum parathyroid hormone level testing are useful investigations to help confirm parathyroid adenoma localisation.

Conclusions:

Primary hyperparathyroidism has many different entities, including single or multi-gland parathyroid adenoma, intrathyroidal or ectopic adenoma. It can also exist with concurrent thyroid pathology.

Therefore, intra-operative localisation can potentially be challenging and surgeons should be aware of the possible variations that can be encountered.

Furthermore, if an ectopic adenoma is localised pre-operatively with imaging, depending on its anatomical position, practical difficulties with the surgical approach to remove it may be experienced.

Re-operative parathyroid surgery following unsuccessful primary surgery is also one of the most challenging aspects of managing parathyroid disease.

References:

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