How complicated can a Parathyroidectomy really be?

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Abstract (300 word limit)

Statement of the Problem: Parathyroid adenomas often drive disturbance in serum calcium levels. This report presents a unique anatomical location of a parathyroid adenoma excised due to primary hyperparathyroidism.

Case: 79-year-old female with primary hyperparathyroidism, osteoporosis and previous fragility fractures underwent a parathyroid exploration. Pre-operative blood parameters included a parathyroid hormone level of 17.2pmol/L, Calcium of 2.71mmol/L. Ultrasound scan revealed an incidental multinodular goitre and increased tracer uptake on Sestamibi parathyroid scan. Given the patient was an operable candidate a contrast enhanced CT scan with dedicated 4D Parathyroid protocol was performed demonstrating a 1cm arterially hyper enhancing nodule close to the oesophagus and deep to the superior pole of the right thyroid lobe. Extensive parathyroid exploration exposed a superior parathyroid adenoma localized in the right prevertebral space with identification of a non-recurrent laryngeal nerve. Level 6 lymph node dissection was performed along with excision of the parathyroid adenoma. Histological examination revealed parathyroid adenoma and hyperplasia with no cytological atypia, mitoses or necrosis. Post operative calcium serum level was 2.62mmol/L. This is the first case report to disclose a parathyroid adenoma located in the prevertebral space associated with a non-recurrent laryngeal nerve. Head and neck surgeons should be aware of possible anatomical variations in parathyroid adenoma location when listing for excision.

Conclusion & Significance: Location of parathyroid adenomas can be highly variable. The prevertebral location along with a non-recurrent laryngeal nerve highlights to head and neck surgeons detailed exploration may be required thus adequate theatre time slots should be allocated for parathyroid exploration.

Image

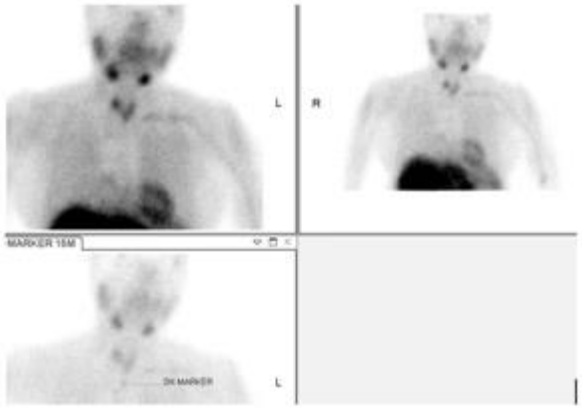


Figure 1: Nuclear medicine Sestimibi Tc^{99}scan – 11mm increased uptake at the level of right upper thyroid

Recent Publications (minimum 5)

1. Agha RA, Fowler AJ, Saeta A, Barai I, Rajmohan S, Orgill DP; SCARE Group. The SCARE Statement: Consensus-based surgical case report guidelines. Int J Surg. 2016 Oct;34:180-186.
2. Agha RA, Al Omran Y, Wellstead G, Sagoo H, Barai I, Rajmohan S, Borrelli MR, Vella-Baldacchino M, Orgill DP, Rusby JE. Systematic review of therapeutic nipple-sparing *versus* skin-sparing mastectomy. BJS Open. 2018 Dec 19;3(2):135-145.
3. Agha RA, Fowler AJ, Rajmohan S, Barai I, Orgill DP; PROCESS Group. Preferred reporting of case series in surgery; the PROCESS guidelines. Int J Surg. 2016 Dec;36(Pt A):319-323.
4. GlobalSurg Collaborative. Surgical site infection after gastrointestinal surgery in high-income, middle-income, and low-income countries: a prospective, international, multicentre cohort study. Lancet Infect Dis. 2018 May;18(5):516-525.
5. Gundogan B, Dowlut N, Rajmohan S, Borrelli MR, Millip M, Iosifidis C, Udeaja YZ, Mathew G, Fowler A, Agha R. Assessing the compliance of systematic review articles published in leading dermatology journals with the PRISMA statement guidelines: A systematic review. JAAD Int. 2020 Sep 7;1(2):157-174.
6. Agha RA, Barai I, Rajmohan S, Lee S, Anwar MO, Fowler AJ, Orgill DP, Altman DG. Support for reporting guidelines in surgical journals needs improvement: A systematic review. Int J Surg. 2017 Sep;45:14-17.
7. Rajmohan S, Gundogan B, Agha RA. Re: "Did you write a protocol before starting your project?". Gen Thorac Cardiovasc Surg. 2016 May;64(5):302-3.

Photograph



Biography (150 word limit)

Dr Rajmohan is currently an NHS surgical trainee in ENT. He graduated with Triple Distinction from Imperial College London winning prizes and obtained 1st class honours in Pharmacology. He is a Member of the Royal College of Surgeons England and an Associate Fellow of the Higher Education Academy. He has produced several publications within the field of surgery and was part of the team that developed the SCARE + PROCESS reporting guidelines winning the Harold Ellis Prize. He has peer-reviewed for Annals of Medicine & Surgery and advocates great transparency in research and is a keen educator.

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Notes/Comments: