

RADIOGUIDED MEDIASTINAL PARATHYROIDECTOMY IN A PATIENT WITH PERSISTENT RENAL HYPERPARATHYROIDISM

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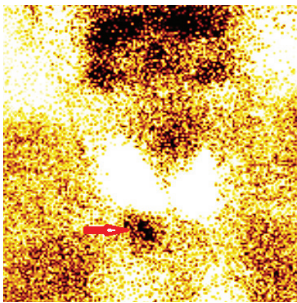


Figure 1. Tc-99m MIBI scintigraphy after initial surgery (arrow pointing the PT).

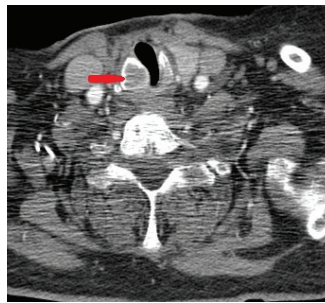


Figure 2. Computer tomography after initial surgery (arrow pointing the PT).

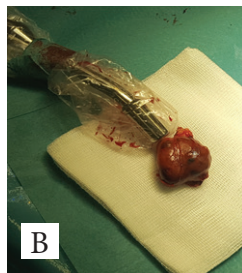


Figure 3. A: Intraoperative gamma probe localization. B: Removed PT and *ex vivo* radiation count.

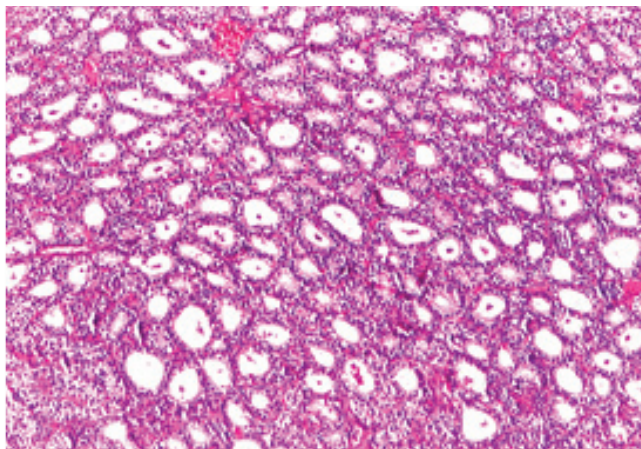


Figure 4. Adenomatous hyperplasia of removed PT – microscopy HE, x 4.

Radioguided parathyroidectomy has proven to be effective for the minimally invasive approach of primary hyperparathyroidism (HPT) but also in secondary HPT (1). We report the case of a 56 year old obese male with persistent secondary HPT following an extensive cervical exploration and removal of three parathyroid (PT) glands, as the right superior PT could not be found. However, PTH decreased from 3400 pg/mL (preoperatively) to 1900 pg/mL postoperatively. Subsequently a diagnostic work-up consisting of Tc-99m MIBI scintigraphy (Fig. 1) and computer tomography (Fig. 2) revealed an ectopic upper posterior mediastinum PT adenoma. A reintervention was scheduled and in order to secure the location of the PT, Tc-99m MIBI was injected intravenously one hour prior to surgery. Intraoperatively we identified the ectopic right upper PT with portable gamma probe (Fig. 3 A,B) and removed it followed by reimplantation of PT fragments into the sternocleidomastoid muscle. A significant decrease of PTH levels was recorded both intraoperatively (iqPTH = 864 > 50 % decrease) and 48 hours postoperatively (12 pg/mL). Both frozen section and paraffin histology confirmed the adenomatous hyperplasia of removed PT (Fig 4).

Conflict of interest

The authors declare that they have no conflict of interest.

References

- Desiato V, Melis M, Amato B, Bianco T, Rocca A, Amato M, Quarto G, Benassai G. Minimally invasive radioguided parathyroid surgery: A literature review. *Int J Surg.* 2016;28 (1): 84-93.

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