AB096. 67. The value of preoperative imaging and disease localisation in parathyroid surgery

Grace O'Flanagan, Laura McLoughlin, Bronagh Lang, Emma Keane, Conrad Timon

Department of Ear, Nose, Throat, Head and Neck Surgery, Royal Victoria Eye and Ear Hospital, Dublin, Ireland

Background: There has been an increase in prevalence of primary hyperparathyroidism (pHPT) in recent decades, with a corresponding rise in parathyroidectomies. Our aim was to assess the correlation of preoperative imaging with intra-operative findings in pHPT and determine the benefits of preoperative localisation.

Methods: This was a retrospective review of consecutive parathyroid surgeries performed by a single surgeon over 20 months. Patients underwent preoperative ultrasound and sestamibi/single-proton emission computed tomography (SPECT CT) for disease localisation. We assessed the correlation of radiological findings with incision size and operative duration.

Results: Our study included 75 patients (60 female, 15 male). Mean age was 60 years. Sixty-eight patients underwent both ultrasound and sestamibi/SPECT CT. Disease was correctly lateralised in both scans in 25 cases (37%), did not lateralise in 22 (32%), and imaging was discordant in 21 (31%). When both scans were positive, mean duration of surgery was 31 minutes, compared with 75 minutes if scans failed to localise disease (P<0.0001). Positive imaging was also significantly associated with a smaller average incision (2.6 *vs.* 3.6 cm, P<0.0001). Most patients with pHPT (89%) had a single adenoma.

Conclusions: The accuracy of imaging in localising parathyroid adenomas was lower than internationally reported. We caution reliance on these imaging modalities and suggest surgeons may expect imaging and intra-operative findings in line with our results. Positive imaging is associated with reduced operative time and smaller incision. Adjuncts such as 4D-CT and intra-operative PTH measurement may be useful in cases with negative imaging, however, feasibility in all patients is limited due to availability, cost, and radiation exposure.

Keywords: Parathyroid; imaging; parathyroidectomy

doi: 10.21037/map.2019.AB096

Cite this abstract as: O'Flanagan G, McLoughlin L, Lang B, Keane E, Timon C. The value of preoperative imaging and disease localisation in parathyroid surgery. Mesentery Peritoneum 2019;3:AB096.