course of IA mean free T4 was 30 pmol/L and 11.4 pmol/L respectively (range: 9.4 to 22.7 pmol/L). There were no adverse effects to IA. There were no complications following surgery.

**Conclusions:** Iopanoic acid is safe and effective in rapidly controlling thyrotoxicosis prior to total thyroidectomy.

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**0623: SESTA-MIBI SCANS, CAN THEY PREDICT INTRATHYROID PARATHYROID ADENOMA?**

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**Aim:** To evaluate the role of sesta-mibi scans in predicting intrathyroid parathyroid adenoma in primary hyperparathyroidism.

**Method:** Retrospective analysis of parathyroidectomies performed in a district general hospital during the last 6 years (2005–11). Sesta-mibi scans were performed pre-operatively in all patients with primary hyperparathyroidism. Where no adenoma was identified during exploration of neck, a hemithyroidectomy was performed on the side suggested by sestamibi scan.

**Results:** 78 patients had exploration of neck, 82% female, 18% male, with a mean age 62 years. Sestamibi was positive in 60 patients and 54 had parathyroid adenoma identified on exploration. 6 patients after a failed neck exploration underwent hemithyroidectomy. Histology revealed intrathyroidal parathyroid adenoma in 5 patients (83%). Out of 18 patients with negative scans 14 had an adenoma removed. Sesta-mibi scans had a sensitivity of 81% and positive predictive value of 98.3%.

**Conclusion:** Sestamibi scan helped to identify Patients with intrathyroidal parathyroid adenoma when neck exploration was negative. When no adenoma is visible on exploration a hemithyroidectomy was performed on the side suggested by the scan is justified.

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**0681: MINIMALLY INVASIVE PARATHYROIDECTOMY FOR PRIMARY HYPERPTHYROIDISM GUIDED BY INTRA-OPERATIVE PARATHYROID HORMONE MONITORING**

Alison Lyon, O.O. Komolafe, Christopher Wilson. University of Sydney, Sydney, Australia; 2 Western Infrmary, Glasgow, UK

**Aim:** Intra-operative parathyroid hormone (PTH) levels can demonstrate successful removal of a parathyroid adenoma during minimally invasive parathyroidectomy. However, this technique remains controversial due to variations in blood sampling and excision criteria. In this study, we explored the success rate of our technique.

**Methods:** A consecutive series of 92 patients with histologically confirmed primary hyperparathyroidism was analysed retrospectively. All were treated with a minimally invasive technique. Serum PTH levels were checked prior to gland removal and twenty minutes after gland removal to confirm a decrease of greater than 50%, which was considered to indicate a curative procedure.

**Results:** The median pre-operative PTH level was 14.35 ng/L (interquartile range (IQR) 10.7–20.3). The two week post-operative median level was 5.46 ng/L (IQR 3.7–7) and median adjusted calcium level was 2.39 mmol/L (IQR 2.28–2.5).

The average intraoperative PTH decrease was 75.6%. Of the 92 patients, 8 (8.7%) required multiple gland removal due to adenoma location differing to that indicated by preoperative imaging (3 were retrosternal). The biochemical cure rate within this cohort was 98%. 2 patients had no intraoperative PTH drop and persisting hypercalcaemia. They underwent further imaging and curative surgery.

**Conclusion:** Intra-operative PTH monitoring is a useful adjunct to minimally invasive parathyroidectomy.

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**0721: PATIENT OUTCOME FOLLOWING LAPAROSCOPIC BILATERAL ADRENALECTOMY**

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**Introduction:** The aim was to compare outcome of patients undergoing laparoscopic bilateral adrenalectomy (LBA) with those undergoing laparoscopic unilateral adrenalectomy (LUA) for similar conditions.

**Method:** A retrospective analysis was performed of all patients (280) undergoing adrenalectomy in a single institution by the same surgeon between 1999–2011. 25 were LBA; 16 were for adrenal hyperplasia secondary to Cushing’s disease, 5 for bilateral phaeochromocytoma, 3 for metastatic disease, one for bilateral adenomas and a case where one gland was hyperplastic and the other had a phaeochromocytoma. 122 patients underwent LUA for similar conditions during the same time period.

**Results:** The mean operative time for LBA was 220 mins (range 105 to 325) compared to 110 mins for LUA (p < 0.0001). There was one conversion in the LBA group compared to none in the LUA group. There were no intra-operative complications. 2 patients (8%) developed minor post-operative complications in the LBA group compared to 10 (8%) in the LUA group. The mean hospital stay was 3 days in the LBA group (range 2 to 14) compared to 1 day in the LUA group.

**Conclusion:** Laparoscopic bilateral adrenalectomy is safe and associated with similar post-operative outcomes to unilateral laparoscopic adrenalectomy.

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**0912: OUTCOME AFTER THYROID SURGERY - PATIENTS’ PERSPECTIVE**

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**Aims:** The quoted risk of morbidity after thyroid surgery is based on published data from large series but patients’ perception remains insufficiently explored. The aim was to explore and categorise outcomes of thyroideotomy into voice change, swallowing, scar, need for medication and calcium supplementation, and assess these complications from a subjective patients’ point of view. Options of robotic thyroid surgery was also explored with patients.

**Method:** A standardized questionnaire was mailed to 312 patients who underwent thyroid surgery in a large university hospital over 5 years.

**Results:** Subjective voice assessment using a visual analogue scale normal in 130 (67%) patients, deteriorated in 34 (18%), improved in 28 (15%) patients. Voice Handicap Index scores: normal 122 patients, increased in 70 (36%) patients to a median of 17 (range 11–29). As a consequence Voice-Related-Quality-of-Life outcome was excellent in 100 (53%) patients, fair-to-good in 81 (41%) patients and poor-to-fair in 11 (6%) patients. Subjective assessment of swallowing: normal 80 patients; moderately affected 112 patients. Appearance of the scar assessed using the Manchester score ranged from 1-16 (median 7).

**Conclusions:** On direct questioning a large proportion of patients report persistent moderate voice and swallowing problems after thyroid surgery. These findings are similar to the recent international multicentre survey.

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**0961: IS PRE-OPERATIVE 99M-TC SESTAMIBI SCANNING PREFERABLE TO NO PRE-OPERATIVE SCANNING IN PATIENTS WITH PRIMARY HYPERPARATHYROIDISM?**

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**Aim:** Parathyroidectomy is key in the management of hyperparathyroidism, yet the methods used to preoperatively localize parathyroid pathology are controversial. 99m-Tc sestamibi scanning is the most commonly used method, however, some argue that surgical experience is sufficient. The aim of this study is to establish whether preoperative 99m-Tc sestamibi scanning is preferable to surgical experience alone in the identification of pathology in patients with primary hyperparathyroidism.

**Methods:** Retrospective case-note review of 258 patients with primary hyperparathyroidism (199 female; mean age 61.1 ± 13.1 years) who underwent parathyroidectomy between 2003 and 2010 in one centre.

**Results:** 87.2% of patients underwent pre-operative sestamibi scanning. The technique had a sensitivity of 95.8% and a Positive Predictive Value of 96%. The rate of localisation to the correct side was 81.8% - 49.3% of scans could correctly localize the abnormal gland. Where no preoperative scanning was used, the abnormal gland was identified in 97% of cases.

**Conclusions:** Surgical experience alone can successfully identify parathyroid pathology, however, bilateral neck exploration is necessary. Sestamibi scanning is useful in the planning of parathyroidectomy as it reduces the need for bilateral exploration, reducing postoperative morbidity. We acknowledge that surgical experience is also important in improving the accuracy of parathyroidectomy.