

Referral Pattern & Biochemical Work-up of Adrenal Lesions and the Role of Endocrinologists in Managing Patients Undergoing Surgical Adrenalectomy: A Single Centre Audit of 10 Years of Laparoscopic Adrenalectomies

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Background: Laparoscopic adrenalectomy has become the gold standard treatment for adrenal lesions. To ensure the best outcomes, these procedures should be performed by a small number of urologists with a special interest in adrenal lesions in high volume tertiary centres with input from endocrinologists.

Aim: To audit our practice and set standards with reference to preoperative assessment and postoperative follow-up. This is a single centre, single surgeon experience of surgical adrenalectomy over 10 years.

Results: 71 adrenalectomies were performed during the 10 years between 2001 and 2010. Of these, 55 clinical notes were available for review. Male : Female, 24:31. Most patients (18) were between 50 and 60 years old. There was equal gender distribution amongst all age groups except the 21 to 30 year group (Male : Female, 0:4). 5 of the 55 referrals were from other regional hospitals via local endocrinologists. Of the 55 cases, 33 were referred by the endocrinologists, 13 by physicians from other medical subspecialties, 8 were referred by other surgical subspecialties of which 4 were from the local urologists without a specialist interest in adrenal surgery, and a single referral directly from a primary care physician.

Preoperative biochemical screening varied from case to case depending upon each individual clinical presentation.

Preoperative imaging showed an equal distribution between right and left sided lesions (24 each), with 7 cases having bilateral adrenal involvement. In all cases the lesion was solitary. Preoperative radiological investigations involved ultrasound scans in 5 cases, CT scans in 50 cases of which 5 had this done for staging purposes. 11 patients had undergone magnetic resonance imaging (MRI) of which 2 had also had an MRI of the pituitary. No patient had either MIBG or PET scans as a part of their imaging protocol.

Further findings: Preoperative endocrine assessment was only documented in 44/55 cases, whereas postoperative input was noted in 33/55 cases. No preoperative tests were documented in 8 cases. Other biochemistry was performed depending on the clinical presentation. Abnormal biochemistry was found in 36 cases and was normal in 11, with 23 being referred within 4 weeks of the biochemical diagnosis being made. Most patients (32) had their surgery beyond 4 weeks of receipt of the referral. At the time of surgery, 14 of the 55 patients had a non-functioning lesion and 40 had a functioning adrenal lesion (Cortical:31, Medullary:9). 37 of the 55 patients underwent laparoscopic adrenalectomy, with a further 7 requiring conversion to open laparotomy for various reasons. 8 of the cases had a planned open adrenalectomy due to several preoperative factors, whilst 3 adrenalectomies were performed as a part of another procedure

Follow-up: Histology was benign in 49 case and malignant in 5. The urologist followed up 33 of the 55 cases within 8 weeks and 11 patients were seen after 2 months. 11 patients had no postoperative urological review. Endocrine follow up occurred for 38 cases within 6 weeks of surgery, with no follow up deemed necessary for 17 cases

Discussion: This audit has shown that the management of adrenal lesions even in tertiary centres can be improved. Since this audit was initiated, we have streamlined our referrals with a greater use of standardised pre-clinic investigations for blood and urine tests. The next set of investigations is dependent on the nature of the adrenal lesion. However, it is clear that good outcomes should be achieved with standardisation of protocols between endocrinology and urology for patients presenting with adrenal lesions