PATIENT INFORMATION · PROCEDURE 07

Adrenal Surgery (Laparoscopic Adrenalectomy)

Laparoscopic adrenalectomy for functional and non-functional tumours.

The adrenal glands sit above each kidney. They occasionally develop tumours — some hormonally active (Cushing's, Conn's, phaeochromocytoma), some found incidentally on a scan.

What it involves

Laparoscopic adrenalectomy — through three or four small incisions — is the standard of care for most benign adrenal tumours. Dr Marais's endocrine surgical training makes this a familiar operation rather than an unfamiliar one.

Adrenal tumours fall into three broad groups. Functional tumours secrete hormones — cortisol (Cushing's syndrome), aldosterone (Conn's syndrome), or catecholamines (phaeochromocytoma). Non-functional incidentalomas are found on scans done for other reasons. Rarely, adrenal cortical carcinoma or metastasis is the cause.

Phaeochromocytoma requires two to three weeks of alpha-blockade before surgery to prevent dangerous blood-pressure swings intra-operatively. This preparation is done in partnership with an endocrinologist and the anaesthetic team, and is what makes phaeochromocytoma surgery safe in experienced hands.

The laparoscopic approach can be transperitoneal (through the abdomen) or retroperitoneal (through the back). Both give excellent results; Dr Marais uses the transperitoneal approach for most cases with good visualisation of the surrounding vascular anatomy.

When it's indicated

Functioning adrenal tumours, incidentalomas above 4 cm, tumours showing suspicious features on cross-sectional imaging, or when hormonal testing shows autonomous secretion.

The approach

Adrenal surgery is delicate and low-volume by nature. Preparation matters — particularly for phaeochromocytoma — and the team includes anaesthetists comfortable with these cases.

Recovery

Two nights in hospital typically. Return to desk work at one to two weeks; heavy activity at four weeks. Hormonal cure — resolution of high blood pressure, weight, mood — usually follows within weeks to months.

Common questions

Do all adrenal masses need surgery?

No. Small (under 4 cm), non-functional, benign-looking incidentalomas can usually be followed with periodic imaging. Surgery is reserved for functional tumours, large lesions, or suspicious imaging features.

Will I need medication after adrenalectomy?

If both glands are removed (rare), lifelong steroid replacement is required. After removing a single gland for Cushing's syndrome, temporary steroid replacement is given while the other gland recovers.

How is phaeochromocytoma surgery different?

It requires meticulous pre-operative blood-pressure control with alpha-blockade for two to three weeks. The operation itself is technically similar but the anaesthetic requires close attention to blood-pressure swings when the tumour is manipulated.

This brochure is general information about a surgical procedure and does not replace a consultation. Every patient's circumstances are different — please discuss your specific case with Dr Marais before deciding on treatment.