

Trans-sphenoidal Hypophysectomy

Surgery for pituitary glands is nearly always for removal of pituitary tumour and occasionally for removal of normal pituitary gland. Hypophysectomy is widely used to express both operations. Pituitary operations are performed by neurosurgeons 'from below' through trans-sphenoidal i.e. sublabial trans-septal trans-sphenoidal route and 'from above' through craniotomy. Otolaryngologists operate through trans-ethmoidal route. In 1909, Cushing started sublabial trans-septal operations. In 1950, surgeons started removing the normal pituitary gland as a part of treatment of carcinoma of breast and prostate.

Hypophysectomy is done in various surgical and medical indications. A surgical indication for removing pituitary is pituitary adenoma. Recent advances in imaging and angiographic studies can identify early microadenomas of the gland.

A large adenoma may expand upwards causing headache, papilloedema, bilateral visual field defect leading to blindness, or involving cavernous sinus, base of the skull, orbit, CSF leakage and meningitis. Endocrinologists usually refer their cases for removing a microadenomas for acromegaly and gigantism, Cushing's disease of pituitary origin, Nelson Syndrome, or prolactinoma. Normal pituitary gland may need to be removed in breast and prostatic malignancies.

Trans-sphenoidal hypophysectomy is an effective and safe treatment approach and is a widely employed surgical maneuver to pituitary lesions and represent a major development in safe surgical treatment for hormonally active and nonfunctioning tumours. The goal of surgery is normalization of hormonal secretion.

A sublabial trans-septal trans-sphenoidal approach is not only safe, it also satisfies the need of cosmetic indications. After opening the pituitary fossa trans-sphenoidal microdissection is done under operating microscope with 300 mm objective lens. Microdissection involves removal of the tumour pressing the normal gland. Experience is required to identify normal and abnormal gland by inspection. Hypotensive anaesthesia is essential. Once identified the microadenoma is curared and sucked away. The normal gland is firm and yellow, and the tumour is softer, creamy to haemorrhagic, and solid or cystic. Diabetes insipidus occurs if the posterior pituitary or stalk is damaged.

While trans-sphenoidal approach is an upcoming surgical procedure in the domain of neurosurgeons, the overall management of pituitary tumours is done by a coordinated management plan involving endocrinologists, neurosurgeons and oncologists.

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