PITUITARY TUMOURS
AN OVERVIEW FOR GP'S

Australian Pituitary Foundation

WHAT ARE PITUITARY TUMOURS?

Pituitary tumours may affect any part of the pituitary, therefore the symptoms are wide-ranging and may not be recognised by the patient for some years. However, certain clusters of symptoms can give an indication of possible pituitary dysfunction.

Patients are often aged between 30–60 years and may have chronic headache and visual symptoms, particularly deteriorating peripheral vision. There may be symptoms of primary hormone hypersecretion, such as hyperprolactinaemia, acromegaly or Cushing's disease. However, symptoms may be much more general, including fatigue, amenorrhoea, loss of libido and erectile dysfunction associated with pituitary hypofunction. More rarely, a patient may present with polyuria as a result of diabetes insipidus.

INCIDENCE AND PREVALENCE

4 new cases per 100,000 population per year[1] (approximately 910 Australians every year).
78–94 cases per 100,000 population[2,3] (approximately 17,600–21,300 Australians affected at any given time)

WHAT ARE THE SIGNS AND SYMPTOMS?

- Pressure effects – headache and visual disturbance (e.g. loss of temporal vision)
- Inappropriate hormone secretion – e.g. PRL (hyperprolactinaemia), ACTH (Cushing's disease), GH (acromegaly)
- Hormone hypersecretion from a functioning tumour; or hyposecretion due to compression of the pituitary, hypothalamus or pituitary stalk
- Amenorrhoea and/or loss of libido caused by disturbance of FSH, LH, PRL or GnRH secretion

DIAGNOSIS

Pituitary tumours are often discovered:

- **Incidentally** – after a scan for another health issue
- **Visual disturbances** – if the patient presents with vision problems (tunnel vision, blurred vision, double vision) and headaches
- **Hormonal issues** – if the patients has symptoms associated with too little or too much hormone.

Tests to diagnose a pituitary tumour include:

- **Blood tests** – to measure hormone levels.
- **Scans** – a magnetic resonance imaging (MRI) or computed tomography (CT) scan can study the pituitary gland
- **Vision testing** – to check visual field

TREATMENT

Objectives of treatment:

- **Relief of pressure symptoms**
- **Restoration of appropriate hormone levels**
- **Prevention of further tumour growth**

Treatment options:

- **Surgery** – Surgery is usually transsphenoidal and typically involves a 4–5 day stay in hospital. Rarely, if the tumour is large, other approaches such as subfrontal surgery may be required. It is recommended that surgery be undertaken in a centre for pituitary diseases, or by a neurosurgeon with pituitary surgery expertise. Surgical treatment may be followed by other treatments, such as radiotherapy or medical intervention. Removal or reduction of the tumour may result in temporary or permanent damage to the normal pituitary tissue, resulting in hypopituitarism. Diabetes insipidus may also occur after surgery, but this is likely to be transient.
- **Radiotherapy**– Radiotherapy reduces the rate of recurrence of tumours and may be carried out alone or in conjunction with other treatments. In some cases, but not all, the principal long-term side effect of radiotherapy is gradual loss of pituitary function, ultimately resulting in the need for permanent hormone replacement therapy. Regular hormonal assessment is required in the long term to detect hormone deficiencies promptly.
- **Medical treatment** – For prolactinomas, drugs such as cabergoline, bromocriptine or quinagulide are the first-line treatments and often shrink the tumour as well as decrease hormone secretion. For other tumour types, medications are typically used as an adjunct to surgical treatment. Hormone replacement is needed in many cases. Analogues of somatostatin can block GH secretion in acromegaly.

QUESTIONS PATIENTS MAY ASK

Have I got cancer?

No – in this case tumour just means a benign 'lump'. Pituitary tumours only very rarely spread to other parts of the body. If left untreated, they may gradually increase in size.

Will I need treatment?

Not necessarily. Up to one in five people have a small pituitary tumour. If a small tumour is discovered accidentally, it may not be necessary to have any treatment at all. Treatment is only required if the tumour is causing you problems. Small tumours will be monitored to make sure they do not get larger.

Regular follow- up appointments with your endocrinologist are essential.

Will it go away when I'm treated?

It is often not possible to remove the tumour entirely. In most cases, however, its growth and activity can be controlled.

Will I have to take tablets in the long term?

Drugs given to suppress high hormone levels produced by the tumour may not be needed long term if other treatment has been given. If the tumour, or the treatment for it, affects the function of the normal pituitary gland, then long-term replacement therapy will be necessary – most patients find this readily acceptable.

Will I still be able to have a family?

Yes, if the reason for infertility is pituitary disease. In many cases, the effects of pituitary tumours on fertility can be treated.

ABBREVIATIONS

- **ACTH:** adrenocorticotrophic hormone
- **FSH:** follicle-stimulating hormone
- **GH:** growth hormone
- **GnRH:** gonadotropin-releasing hormone
- **LH:** luteinising hormone
- **MRI:** magnetic resonance imaging
- **OT:** oxytocin
- **PRL:** prolactin
- **TSH:** thyroid-stimulating hormone

MORE INFORMATION

The Australian Pituitary Foundation provides social support for patients and carers, and has published a range of patient resources on pituitary conditions and treatments.

For more information, please visit our website: www.pituitary.asn.au

Email: support@pituitary.asn.au

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