Brain Tumour Types Info Sheet

Pituitary Adenomas

Overview:

Tumour Group:
Non-Malignant Brain Tumours

WHO Grade:
Grade I or II

Prevalence/Incidence:
Pituitary adenomas are low-grade, slow-growing masses that represent about 10% of primary brain tumours, making them the third most common primary brain tumour in adults.

Typical Age Range:
They can occur at any age, but they are more common in older people. Women are more affected than men, particularly during childbearing years.

Description of Tumour:
The pituitary gland is a bean-sized organ located in the midline at the base of the brain, behind the bridge of the nose, in a bony pouch called the “stella turcica.” The pituitary itself is known as the “master gland” because it helps to control other glands and organs in the body. The pituitary gland is involved in the production of several essential hormones.

Pituitary adenomas occur in the pituitary gland, which secretes several crucial hormones including corticotrophin, thyroid stimulating hormone, growth hormone, prolactin, gonadotropins and anti-diuretic hormone.

Stimulation from the hypothalamus may contribute to the growth of a pituitary adenoma.

While certain pituitary tumours secrete abnormally high amounts of one or more of these hormones and cause related symptoms, other are hormonally inactive and do not secrete hormones. Both types of tumours can grow and compress the surrounding tissue, such as the brain and optic nerves.

Most pituitary adenomas grow in the front two-thirds of the pituitary gland. These tumours are classified as “secreting” and “non-secreting.” A secreting tumour produces excessive amounts of hormones. Most pituitary tumours fall into this category; they are further classified by the type(s) of hormones they produce.
Additional support, information and education offered by Brain Tumour Foundation of Canada:

Adult, Pediatric and Non-Malignant Brain Tumour Handbooks available in English and French.

“A Friend in Hope” children’s storybook available in English and French.

20+ Adult Support Groups across Canada (in-person and virtual)

Toll-free information and support line

BrainWAVE Pediatric Support Program

Print BrainStorm Newsletter
Email Newsletters:
  • E-BrainStorm
  • Peace of Mind

“Grey Matters” Blog

Symptoms:
Common symptoms include, but are not necessarily limited to:

• Abnormal growth of hands and feet
• Abnormal hair growth pattern in women
• Abnormal weight gain
• Behavioural and cognitive changes
• Cessation of menstrual periods (amenorrhea)
• Depression
• Impotence in men
• Morning nausea or vomiting
• Vision loss

Treatment/Standard of Care:

• For the great majority of patients with symptomatic endocrine-inactive adenomas surgery is the preferred therapy (trans-sphenoidal surgery is preferred to minimize the morbidity associated with an open craniotomy when possible)

• For recurrent pituitary endocrine-inactive adenomas radiation may be used as either radiosurgery (single fraction) or fractionated daily radiotherapy (using stereotactic techniques), or when significant residual tumour is observed where critical structure are compromised and further surgery not indicated.

• For hormone-secreting pituitary adenomas surgery may be curative (steroid producing adenomas), or endocrine therapy alone

Treatment options depend on the following:

• The type and size of the tumour
• Whether the tumour is making hormones
• Whether the tumour is causing problems with vision or other symptoms
• Whether the tumour has spread into the brain around the pituitary gland or to other parts of the body
• Whether the tumour has just been diagnosed or has recurred

Prognosis:
Pituitary adenomas that are considered Grade I tend to have the most favourable survival rates compared to other higher grade brain tumours.

For more details, please refer to braintumour.ca.