

# Clival Tumours: Chordomas and Chondrosarcomas

**This leaflet offers more information about a Skull Base condition called Clival Tumours. If you have any further questions or concerns, please speak to the staff member in charge of your care.**

## What is a Clival Tumour and why have I got it?

Clival tumours are growths on the *clivus*. The clivus is a sloping portion of bone at the base of the skull, in the middle of the head. It is located directly below the sphenoid sinus. Important nearby structures to the clivus are cranial nerves, the internal carotid arteries and the brainstem. Tumours of the clivus may potentially invade and damage these nearby structures.

Two types of tumours grow in the clivus: Chordomas and Chondrosarcomas.

## Chordomas

Chordomas are rare slow growing primary bone tumours. They arise from cells that were once a remnant of the notochord, an embryonic structure involved in the formation of spinal tissue, while the baby is in the womb.

Chordomas commonly occur in the lower spine and skull base (clivus). They are locally invasive, slow growing malignant tumours. They can be locally aggressive, causing extensive bony destruction to the skull base. They can also cause significant damage by invading nearby structures and have a tendency to recur after treatment. A small subset of patients (~10%) may develop advanced disease, whereby the chordoma can spread to distant sites (a process known as metastasis).

## **Chondrosarcomas**

These tumours are even rarer than chordomas. Chondrosarcomas arise in cartilage. (During development, the skull contains cartilage that eventually hardens and is replaced by bone). They are malignant tumours however they rarely spread to other areas but instead invade nearby structures, much like chordomas. They also tend to recur after treatment.

### **What are the signs and symptoms?**

Since both tumours grow in the clivus, they may affect nearby structures and so their symptoms are very similar and can include any of the following:

- Disturbances to vision – such as double vision, difficulty focusing the eyes or rapid eye movements
- Severe headaches
- Facial pain or numbness
- Paralysis of cranial nerves – causing swallowing, speech and eye movement abnormalities
- Nausea – which is the feeling of being sick
- Fatigue – which is the feeling of extreme tiredness
- Nasal congestion
- Hearing loss.

### **Do I need any tests to confirm the diagnosis?**

Diagnosis is based on history and a neurological examination.

These skull base tumours are best diagnosed by MRI and CT scans, which will clearly show the tumour extent and bony destruction. Chondromas and chondrosarcomas have specific features on imaging, however a biopsy is required to confirm the diagnosis. This tissue sample may be removed prior to surgery or as part of the tumour removal surgery.

Other tests may also be needed prior to surgery such as angiography (typically now performed as a CT angiogram or an MR angiogram), visual field tests, an audiogram and pituitary hormonal tests.

### **What treatments are available?**

Clival tumours are ideally treated with maximal safe surgical removal or debulking. Because chordomas and chondrosarcomas typically invade the bone and dura of the skull base as well as cavernous sinus area, complete surgical resection is often not possible owing to the risk of significant neurological complications. For this reason, continued growth of residual tumour is common.

Given their midline location, most clival chordomas and chondrosarcomas are best removed through the nose via an endoscopic transphenoidal approach. This is often done by both an Ear, Nose & Throat and Neurosurgeon.

However, some extensive and/or laterally placed chordomas may require different skull base surgical approaches, including a craniotomy, whereby the Neurosurgeon will remove part of the bony skull.

Radiation therapy may be used after surgery, especially in cases of subtotal resection. Even with radiation therapy, clival tumours may recur, requiring additional surgery or radiation therapy.

Clival tumours do not generally respond to chemotherapy and it is rarely used.

### **What happens if I do not get treatment?**

Should you decide not to have treatment, the chances are that your symptoms will potentially get worse if the tumour continues to grow and this could result in you generally feeling unwell and of course at the very worst a serious threat to your life.

## Is there anything I can do to help myself?

Maintain a healthy lifestyle, keep in touch with your healthcare/skull base team and inform them of any changes you are experiencing.

## Contact us

If you have any question or concerns then please contact the Clinical Nurse specialist during Working hours of 7.00am to 4.30pm Tuesday to Friday.

- Telephone: 020 8725 4468
- Email: [stgh-tr.skullbase@nhs.net](mailto:stgh-tr.skullbase@nhs.net) or [Veronica.Barnes@stgeorges.nhs.uk](mailto:Veronica.Barnes@stgeorges.nhs.uk)
- Urgently on Bleep 7171 via switch on 020 8672 1255

You can contact the ward outside of normal working hours if there is anything about which you are concerned.

- Brodie ward: 020 8725 4646 / 4647
- McKissock ward: 020 8725 4644 / 4645

Other useful contact numbers:

- Neurosurgical Bed Manager: 020 8672 1255 Bleep 7251
- Mr Patel and Mr Martin secretary: 020 8725 4172
- Miss Little secretary: 020 8725 2052
- Mr Stapleton secretary: 020 8725 4508
- Mr Minhas secretary: 020 8725 4524

**For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit [www.stgeorges.nhs.uk](http://www.stgeorges.nhs.uk)**

## Additional services

### Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

**Tel:** 020 8725 2453 **Email:** [pals@stgeorges.nhs.uk](mailto:pals@stgeorges.nhs.uk)

### NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

**Web:** [www.nhs.uk](http://www.nhs.uk)

### NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

**Tel:** 111

### AccessAble

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website ([www.accessable.co.uk](http://www.accessable.co.uk)). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



Reference: NEU\_CTCC\_02\_LP Published: September 2021 Review date: September 2023