Craniovertebral Decompression

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Guidance notes for people consenting to undergo surgical procedures or other therapeutic interventions

These notes have been prepared to help you understand why you have been offered a surgical operation, or other interventional procedure, to treat your medical condition. In particular, they are to help you understand the consent form which you have to sign before the planned procedure can go ahead. These notes should be read in conjunction with the consent form itself.

These notes will give you information regarding the nature of your planned procedure, what it aims to achieve and the risks involved. It also mentions what could happen if the operation did not go ahead and what alternative treatments might be available. Please remember that every case is different and every person is an individual. The surgeon or person carrying out the procedure will discuss any differences in approach with each patient but these notes should act as a general guide.

After reading these notes, if you have any questions then please talk to your consultant’s secretary or to one the nursing staff, so that they can ask a member of the surgical team to explain further.

Name of procedure: Craniovertebral decompression
(also referred to as Foramen magnum decompression)

What does it involve?

This is a major brain operation, carried out under general anaesthetic. It involves a cut being made in the back of the neck, between the muscles that support the head. For this reason, your neck will feel quite sore for some weeks after the operation, although you will be given painkillers to help with this.
The surgeon will remove some bone from the back of your skull and the upper part of your spine. This does not need to be replaced and its removal is a necessary part of the operation. The membranes that enclose the lower part of the brain and upper spinal cord are then opened. This results in leakage of the cerebrospinal fluid (CSF) that bathes and supports these structures. As a result, you will have a headache when you first wake up from the anaesthetic. This will lessen over the next 12–24 hours and you will be given pain killers to help with this.

Once the membranes are opened, the procedure will vary from one patient to another and you should consult with your neurosurgeon if you would like to know further details about your case.

You will need to be in hospital for about a week in total, sometimes a little longer. It will take at least a month for you to recover at home. You will need help from family and friends over this period, particularly as you will need to avoid lifting and bending forwards. You should keep the wound clean and dry and may require help washing your hair. The ward staff can give you advice on aftercare before you leave. You will need to be driven, rather than drive yourself if you wish to travel. It would be unwise for you to fly anywhere during this period. It may be up to three months before you return to work. By six months, your recovery should be complete.

**How will I benefit?**

Craniovertebral decompression is normally carried out to deal with a condition known as Chiari malformation, or hindbrain hernia. A Chiari malformation is also associated with a condition affecting the spinal cord, known as syringomyelia. The patient information booklet “Hindbrain hernia and syringomyelia, a guide for patients and carers”, published by the Ann Conroy Trust, gives more information about
Chiari malformations commonly cause headaches but these usually reduce significantly or even resolve completely following a successful craniovertebral decompression. However, a significant minority of patients do continue to suffer from headaches to some degree, but they are usually not as severe as before the surgery.

Other symptoms of Chiari, such as unsteadiness and visual disturbances, may also improve. Pains and sensory disturbances in various parts of the body may or may not improve.

If you have syringomyelia as a result of your hindbrain hernia then there is a very good chance that this will collapse after the procedure. It may not disappear completely but its collapse should protect you from developing progressive disability in the future. It will also provide an opportunity for some recovery in function, like strength and dexterity in the limbs, although such improvements cannot be guaranteed. Body pains and sensory disturbances may or may not improve.

**What are the risks?**

A craniovertebral decompression is a major brain operation and can never be undertaken without some risk of harm, including a risk of death or serious physical or mental disability, including paralysis and stroke. These complications can develop as a result of damage to important blood vessels, the brain stem or nearby nerves but this is rare. The likelihood of any of this occurring is about one – two per cent. Less severe complications, such as areas of numbness affecting part of the body, can also sometimes occur.

Temporary complications can also occur, including leakage of CSF from
the surgical wound. This is usually treated by temporarily draining some of this fluid from the lower part of your spine. Bacterial meningitis sometimes develops as a result of CSF leakage but this can be treated with antibiotics.

Another form of meningitis is seen much more often and is referred to as aseptic or chemical meningitis. This is not caused by infection but results from chemical irritation of the membranes that enclose the brain, resulting in inflammation. This causes symptoms of nausea and sickness to develop. This problem usually settles after a few days, although it can occasionally persist for longer.

What might happen if the procedure does not go ahead?

Chiari malformations in adults rarely pose any threat of harm, unless the affected individual experiences blackouts which are clearly brought on following a coughing fit or something similar – usually involving physical straining of some sort. Surgery for hindbrain hernia is therefore usually most often carried out because the headaches and/or other symptoms are making life intolerable for the individual. Many people may wish to avoid having a major brain operation and will prefer instead to cope with their symptoms by avoiding, as much as possible, those actions that bring on the discomfort.

Even when a Chiari malformation is complicated by the formation of a syringomyelia cavity, surgery is not necessarily essential. Many syrinx cavities remain in a stable state for many years and affected individuals seldom experience rapid or major deterioration in their condition. Those with syringomyelia may certainly consider surgery, but it may be reasonable to wait and see what happens, before deciding to go through with this option.
Are there any alternative treatments?

Some patients may find that their headaches improve if they take a type of drug known as a diuretic. These drugs reduce the rate at which CSF forms and may reduce the severity of headaches down to a manageable level.

If you are carrying extra weight, then losing some of this can reduce the pressure inside your head and may improve matters, so that surgery becomes unnecessary.

You may gain useful emotional support simply by talking to other people who live with these conditions. One way for patients living in the UK to do this is by contacting the charity and patient support group, the Ann Conroy Trust: www.annconroytrust.org.
Please use the space below to write down any questions you may have and bring this with you to your next appointment.
The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4323.