NORTH SHORE & SYDNEY
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THYROGLOSSAL DUCT CYST, DERMOID & BRANCHIAL REMNANT

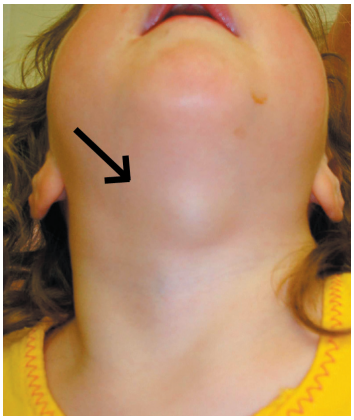
What is a thyroglossal duct cyst and a dermoid?

A thyroglossal duct cyst is a remnant of the pathway that the thyroid gland follows in its development from the back of the tongue to the neck. It normally contains thick, clear fluid. If not removed it tends to slowly enlarge over time and there is a risk of infection. If the cyst becomes infected, this causes pain and discomfort and treatment with antibiotics is usually required. In some cases a minor operation to drain any pus has to be performed before a final operation to remove the cyst. In contrast, a dermoid is a collection of skin cells trapped usually quite deeply under the skin surface. They are common in the head and neck area but can occur elsewhere in the body. Again, they tend to slowly enlarge with time and can become infected. Occasionally the cyst may rupture if the child knocks it against a firm surface.

A branchial remnant is a small cysts, piece of tissue or opening in the neck that may fail to disappear during the development of this complex part of the body in the mother's womb. They are generally removed as the may discharge or become infected.

General description

The aim of the surgery is to remove the entire cyst. In the case of the thyroglossal duct cyst, any potentially remaining communication between the cyst and the back of the tongue will be removed with the middle portion of a small bone in the neck called the hyoid bone. There should be no long-term problems from removing this piece of bone. The procedure typically takes between 30 minutes and one hour and is performed under a general anaesthetic.



Thyroglossal Duct Cyst

Preparations

Your child will need to fast for all solids and milk liquids generally for about 6 hours before the start of the procedure. In breast-fed babies or infants this time may be reduced after consultation with the anaesthetist. Water may be allowed up to 2 hours beforehand. You will be called by the hospital approximately 48 hours prior to surgery to be advised of your admission and fasting times. It is often helpful to bring your child's favourite toy with you on the day.

Anaesthesia

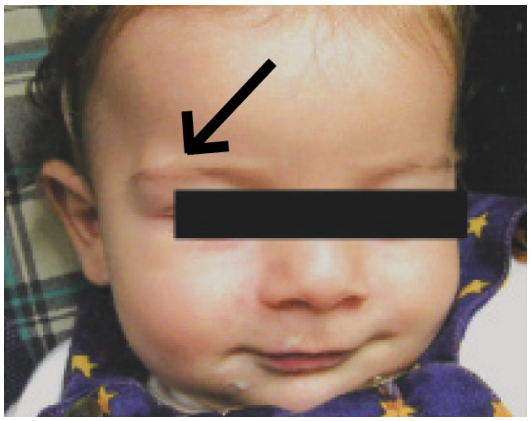
You and your child will meet the anaesthetist prior to the procedure. After talking to you and briefly examining your child, they will take you through to the operating theatre. One parent is welcome to accompany your child until they are asleep. The anaesthetist puts your child to sleep via a face mask (with children 5 years and over there is the option of either a face mask or a needle with numbing cream). You will then be shown to a waiting room. It is very important that you remain available in this area during your child's surgery so that we can quickly contact you in an emergency. Once your child is asleep, the anaesthetist will insert a 'drip' to allow fluids to be given directly into a vein. Usually this is located in the hand or arm, but occasionally may need to be sited in the leg or scalp.

Procedure

The area over the cysts or remnant is cleaned with an antiseptic solution. A local anaesthetic block is injected into the area so that the site of the operation will be numb afterwards. This block usually lasts for 4 to 6 hours. A cut is made directly over the cyst or remnant. The cyst or remnant is carefully removed to avoid rupture if at all possible. The wound is washed in sterile water to reduce the risk of the cyst or remnant returning by destroying any cells inadvertently released during the surgery. The wound is then closed with dissolving stitches buried under the skin. A clear water-resistant dressing is then placed over the wound. In addition, in the case of a thyroglossal duct cyst or remnant, the middle portion of the hyoid bone in the neck is removed with any remains of the pathway between the back of the tongue and the cysts or remnants tied off with a dissolving stitch.

Initial recovery

Once the operation has finished, your child will be taken to the recovery area. When they are awake, you will be called into the recovery ward. Often children appear distressed and a little confused initially - there may be several reasons for this including residual effects of the anaesthetic, hunger, and some discomfort. Generally they will settle quite quickly, especially if offered a drink or feed. The recovery and ward staff are also able to give additional pain relief medication once your child is awake if required. The nursing staff will check the wound and make sure you are happy before you go home. Usually this will be about 2 hours after the surgery.



Typical dermoid around right eye

Post-operative course

Paracetamol ('Panadol') should be given on the afternoon and evening of surgery, and in the morning of the following day. After that time, assess your child's pain to see if further doses are required. Children over 12 months of age may require additional pain relief with ibuprofen ('Neurofen'). for the first day or so. Follow the manufacturer's dose instructions for your child's weight. Paracetamol (no more than 4 doses in 24 hours) and ibuprofen (no more than 3 doses in 24 hours) can be given together if required.

Your child should not be bathed on the first night but showers are safe from the next day onwards. There may be a small amount of blood that oozes from the wound under the dressing in the first 24 hours. Generally the dressing does not need to be changed, but if you are concerned please discuss with your local doctor or myself. You should remove the dressing completely after a long bath on the fifth day after the operation. No further dressings are then required. Your child can begin eating when they get home. Start with clear liquids (apple juice, iceblocks) and add solid food slowly and in small amounts. Your child may vomit from the anaesthesia on the day of surgery. This should stop by the morning after surgery.

Return to activity

Your child may return to day care or school when comfortable, usually within 3-5 days. They should not participate in sports or swimming for 3 weeks after the surgery.

Call the office if:

- You see any signs of infection: redness along the incision site, increased swelling, foul smelling discharge from incision
- Your child's pain gets worse or is not relieved by painkillers
- There is bleeding (small ooze of blood in the first day or two is normal)
- Your child has a high temperature
- Vomiting continues on the day after surgery
- You have any questions or concerns

Follow-up

Normally I see you and your child about 3 to 6 weeks following surgery. This is both to ensure that the wound has healed and that you and your child are satisfied with the results of the operation. For patients from rural areas, this review may be deferred to your own general practitioner if you prefer. Please ring soon after the operation to book the post operative appointment to arrange a convenient time.

Problems & further surgery

As with all surgical procedures, there is a small risk of bleeding or infection of around 2%. The main risk following both procedures is the risk of recurrence of the cysts. In the case of a dermoid this is around 2%, but may be up to 10% for a thyroglossal duct cyst. Both rates are higher is the cyst has been infected in the past. The risk is minimised by the use of magnification during the procedure and sterile water to wash out the wound. If the cyst does recur a second operation will be required.

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