



Manchester University
NHS Foundation Trust

Royal Manchester Children's Hospital Paediatric Otorhinolaryngology (ENT)

Thyroglossal Duct Cyst Surgery (Sistrunk Procedure)

Information for Parents, Carers and Patients

Consultant:

Tel:





What is a thyroglossal duct cyst?

A thyroglossal duct cyst is a fluid-filled cyst in the front of the neck. It is formed from leftover tissue from the development of the thyroid gland when your baby is forming in the womb. Although the cyst is present at birth, you may not be able to see or feel it until your child is a little older.

What causes a thyroglossal duct cyst?

The thyroid gland forms during the early stages of development in the womb. It begins its development at the base of the tongue and gradually moves down to take up its final position in the neck before your baby is born. It makes this journey through a channel or duct known as the thyroglossal duct. This duct normally goes away once the thyroid gland has reached its final position in the neck. If some of the duct remains, this can leave little pockets allowing cyst(s) to develop.

What are the symptoms of a thyroglossal duct cyst?

The cyst may not be apparent until a few years or more after your child is born. Symptoms can occur a bit differently in each child. The most common finding is a small, soft, round lump (cyst) in the middle of your child's neck between the Adam's apple and the chin. If the cyst becomes infected (usually around the time your child has a cold), it may get bigger and become red, hot and tender. Sometimes, an infected cyst can burst leading to some pus-stained discharge. While this can look alarming, it is often easily treated with antibiotics. If the cyst is large, it may cause your child some difficulties breathing and/or swallowing.

How is a thyroglossal duct cyst diagnosed?

A thyroglossal duct cyst is usually diagnosed clinically when the Consultant examines your child. An ultrasound scan is often done to check the cyst and thyroid gland. There are other congenital (present at birth) neck cysts which





can closely resemble a thyroglossal duct cyst. The most common of these is a dermoid cyst. Sometimes, a dermoid cyst cannot be distinguished from a thyroglossal duct cyst based on a combination of clinical examination and ultrasound, and the answer is not known until the cyst is removed and examined in the lab.

How is a thyroglossal duct cyst treated?

The treatment for a thyroglossal duct cyst is surgical removal. There is no known medical treatment for a thyroglossal duct cysts with the exception of antibiotics if the cyst is infected. If the cyst is infected, the infection should be treated and resolved before surgery is undertaken. It is well documented that the removal of a thyroglossal duct cyst before it becomes infected is associated with better outcomes than if the cyst is removed after a previous infection.

The Sistrunk procedure is the most effective procedure for removing the cyst so that it does not recur (come back). The procedure involves not only removal of the cyst but of the thyroglossal duct track from which the cyst formed. This involved removing the central portion of the hyoid bone (a small horseshoe-shaped bone located above the Adam's apple) as well as a small section of the tongue base. Removal of the central portion of the hyoid bone will have no effect of your child's swallowing or speaking. The Sistrunk procedure is associated with recurrence rates of between 2.6 - 5% compared to recurrence rates of up to 70% if only the cyst is removed.

What are the risks of this procedure?

This is generally a simple and safe operation. However, all operations carry some risks. These include:

- Infection – this is unusual but is very responsive to antibiotics if it does occur
- Bleeding – a small amount of blood-stained ooze/discharge is not uncommon in the first few days after surgery
- Scar – although most neck wounds heal very well, some children may develop excess scar tissue (keloid) over the wound site. If it does occur, this may require further treatment





- A fluid build-up (seroma) behind the wound. It may be necessary to remove the fluid using a needle and syringe. Very rarely, this may need to be done more than once
- Fistula formation – sometimes, there can be a persistent leak of fluid from the site of the operation. This is called a fistula and may need further treatment
- Damage to the hypoglossal nerve – this is a nerve which runs close to the outer portion of the hyoid bone. Damage to this nerve could result in paralysis to that side of the tongue. Injury to this nerve is extremely rare as your surgeon will take care to only remove the central portion of the hyoid bone, away from the nerve
- Recurrence – although a Sistrunk procedure is associated with a very small risk of recurrence, this is not zero. If the cyst did recur, your child would likely require further surgery
- There is also a very small risk with any anaesthetic. However, modern anaesthetics are very safe.

What will happen on the day of the procedure?

Information about how to prepare your child for their operation will be included in their admission letter. It is important to follow these instructions. Failure to do so may result in the procedure being delayed or cancelled.

Your surgeon will speak to you again on the day of surgery to once again go through the procedure, risks and complications with you and to answer any questions you may have following your clinic/ward review. As the procedure is performed under a general anaesthetic, your child will also be reviewed by an anaesthetist on the day of surgery. They will be able to answer any questions you may have relating to the general anaesthetic.

Once your child is asleep, the procedure takes approximately 1 hour. Your surgeon will make an incision (cut) in a naturally-occurring skin crease in the neck to open the skin and muscles over the cyst. The cyst is then



removed along with the central portion of the hyoid bone and a small cuff of tongue base tissue and sent to the laboratory for testing. The muscles and skin are then closed in layers using absorbable stitches. Depending on each case, your surgeon may/may not leave a small drain (plastic tubing) in the wound. This is left in overnight and can easily be removed on the ward the following day. Your child will then be taken to the recovery room

What will my child be like afterwards?

Your child will recover from the anaesthetic in the recovery room and then be taken to the ward. It is not uncommon for children to be a little tired and disorientated after a general anaesthetic.

Your child can drink as soon as they are awake. Nursing staff will advise you when your child may eat.

Your surgeon will speak to you again following the procedure to let you know how it went. In most cases, your child will stay in hospital overnight to be monitored for any wound swelling or difficulty breathing. There may also be other factors in your child's medical history and general health that require an overnight stay, including if a drain is used.

Follow up will be arranged by the ENT team and you will be sent a letter with an appointment for your child.

Is there anything I need to watch for when my child goes home?

After discharge, an appointment will be made to see your surgeon in a few weeks. In the meantime, if you experience any of the following symptoms, please contact the ward from which your child was discharged for further advice:

- Increased pain, swelling, redness or discharge from the neck or surgical site
- If your child has any difficulties breathing and/or swallowing



- If your child has a persistent fever

When can my child go back to school?

Your child can go back to school once you feel they are back to normal. This is usually within 1-2 weeks of surgery

Covid and surgery

It is likely that having an operation while carrying the Covid-19 virus causes an additional risk of developing complications. How much of a risk this is in children remains unclear. Whilst we are awaiting more details around this, we have taken precautions both prior to admission as well as during hospital stay to limit the risk of Covid-19 in the peri-operative period.

Questions

We understand that there may be questions that either you or your child would like answering. Most of us forget what we were going to ask the doctor or the nurse.

Please write your questions below.

No Smoking Policy





Please protect our patients, visitors and staff by adhering to our no smoking policy. Smoking is not permitted in any of our hospital buildings or grounds, except in the dedicated smoking shelters in the grounds of our Hospital site.

For advice and support on how to give up smoking, go to www.nhs.uk/smokefree.

Translation and Interpretation Service

It is our policy that family, relatives or friends cannot interpret for patients. Should you require an interpreter ask a member of staff to arrange it for you.

تنص سياستنا على عدم السماح لافراد عائلة المرضى او اقاربهم او اصدقائهم بالترجمة لهم. اذا احتجت الى مترجم فيرجى ان تطلب ذلك من احد العاملين ليرتب لك ذلك.

بماری یہ پالیسی ہے کہ خاندان ، رشتہ دار اور دوست مریضوں کے لئے ترجمہ نہیں کر سکتے۔ اگر آپ کو مترجم کی ضرورت ہے تو عملے کے کسی رکن سے کہیں کہ وہ آپ کے لئے اس کا بندوبست کر دے۔

ইহা আমাদের নীতি যে, একজন রোগীর জন্য তার পরিবারের সদস্য, আত্মীয় বা কোন বন্ধু অনুবাদক হতে পারবেন না। আপনার একজন অনুবাদকের প্রয়োজন হলে তা একজন কর্মচারীকে জানান অনুবাদকের ব্যবস্থা করার জন্য।

Nasze zasady nie pozwalają na korzystanie z pomocy członków rodzin pacjentów, ich przyjaciół lub ich krewnych jako tłumaczy. Jeśli potrzebują Państwo tłumacza, prosimy o kontakt z członkiem personelu, który zorganizuje go dla Państwa.

Waa nidaamkeena in qoys, qaraabo amaasaaxiiboaysanu tarjumikarinbukaanka. Haddiiaad u baahatotarjumaankacodsoxubinka mid ah shaqaalahainaykuusameeyaan.

我们的方针是，家属，亲戚和朋友不能为病人做口译。如果您需要口译员，请叫员工给您安排。



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