Thyroglossal Duct Remnant or Cyst

Patient and family information, brought to you by the Education Committee of APSA

Overview - "What is it?"

A thyroglossal duct cyst (TGDC) is the most common congenital neck lesion observed in children. The most common presentation is a soft nodule in the center of the upper neck under the chin in a toddler or child.

- TGDC slightly more common in females.
- It most commonly presents in the first decade of life, usually between years 2 and 5.
- It may present with redness, and drainage if it is infected.
- The thyroglossal duct is a remnant of the developing thyroid gland. When the thyroid develops in baby, it starts at the base of the tongue and travels to its final location in the lower neck. In normal development, the tract that the thyroid creates from the tongue to the neck dissolves. The tract can persist at any point on its line of travel from the tongue to the thyroid, creating a fluid collection or cyst. The most common location is over the small bone called the hyoid bone, in the upper neck, right under the chin.
- The cyst connects through the hyoid bone towards the base of tongue. Removing the middle part of the hyoid bone is necessary to decrease the recurrence of TGDC.

Signs and Symptoms - "What symptoms will my child have?"

Early signs: Thyroglossal cysts will initially present with a painless swelling in the midline. This cyst will move with swallowing or with tongue protrusion.

Later signs/symptoms: If infected, the child will have a tender neck mass and there may be draining pus. The child may have a fever. If the mass swells, changes in voice or pain with swallowing or shortness of breath are possible. Seek immediate medical attention if this is the case.

Diagnosis - "What tests are done to find out what my child has?"

Labs and tests: This condition is diagnosed on physical examination.

Ultrasound: is used to look at the cyst, but also confirm the presence of a normal thyroid gland in the neck.

Conditions that mimic this condition:

A dermoid cyst is a simple cyst from the skin over the neck.
A simple lymph node in the location over the hyoid bone can mimic TGDC.

Treatment - "What will be done to make my child better?"

Medicine: If the TGDC has become infected, antibiotics are needed to help control the infection.

Surgery: If the TDGC is infected, an incision and drainage is necessary to control the infection completely. The infection needs to be controlled before definitive removal of the TDGC.

Preoperative preparation: If surgical excision of a thyroglossal duct cyst is planned, then the child will generally come to hospital the morning of surgery with an empty stomach. The child should shower or bathe the night before or the morning of the surgery. Antibiotics will be given in the operating room, prior to starting the operation. No other preparation is needed.

The procedure to remove a thyroglossal duct cyst is called the Sistrunk operation. When the child is asleep under general anesthesia, an incision is made over the cyst and it is removed. A central piece of the hyoid bone is removed with the cyst to decrease chance of recurrence. If there is a history of infection, a small drain may be sewn in place.

Postoperative care: Often the child will stay one night in hospital to observe for any swelling of the airway and ensure normal breathing. Pain medications will be given.

Risks/Benefits

Risks: Immediate surgical risks are intra-operative bleeding, damage to the surrounding structures such as the airway, the risk of anesthesia and postoperative infection. The risk of recurrence of the cyst is reported at 1-5%.

Benefits: Surgical excision of a TGDC by the Sistrunk procedure prevents infection in the cyst and decreases the chance of a cancer developing in the future.

Home Care - "What do I need to do once my child goes home?"

Diet: Normal diet for age.

Activity: Normal activity and return to school in 3-5 days after operation. Generally, the child will be restricted from physical education or gym class until the surgeon reviews the child in the office at the postoperative visit.

Wound care: This will be explained prior to discharge. Usually keep the wound dry for about three days, after which showers may resume. May want to wait until about a week for soaking the wound (baths, swimming). If a drain is in place, its care would be explained to you prior to discharge.

Medicines: Medicines for pain such as acetaminophen (Tylenol®) or ibuprofen (Motrin® or Advil®) or something stronger like a narcotic may be needed to help with pain for a few days after surgery. Stool softeners and laxatives are needed to help regular stooling after surgery, especially if narcotics are still needed for pain.

When to call a doctor: Any shortness of breath, breathing difficulties or swelling of the neck, call your doctor immediately or call 911. Spreading redness or drainage can be signs of infection and the surgeon should be contacted.

Follow-up care: Post-operative visit at 2-3 weeks after surgery. As the surgery heals, no further treatment is needed.

Long Term Outcomes - "Are there future conditions to worry about?"

Long term outcomes are excellent. Most children heal completely with no further problems. The surgeon will observe for signs of a recurrence.

If the TGDC recurs, then a second operation may be needed. However, if the center of the hyoid was removed at the first operation, and the operation was performed when no infection was present, then the risk of recurrence is low.

Updated: 2019
Author: Joanne E. Baerg, MD
Editors: Patricia Lange, MD; Marjorie J. Arca, MD; Laura Hollinger, MD