



## Branchial Cleft Remnant

### *What is a branchial cleft remnant?*

- During the 5<sup>th</sup> week of fetal development, major head and neck structures are formed. The 5 pharyngeal arches (bands of tissue) are important structures that are formed. These arches contain primitive connective tissue that becomes cartilage, bone, muscle and blood vessels. Incomplete, failed or persistent embryonic development of these arches results in several anomalies or defects in the neck. Two common congenital problems which can occur from this abnormal development are branchial cleft sinuses and cysts.
- First branchial cleft anomalies are rare, but do occur as cysts that lie in front, behind, or below the earlobe or under the jaw. A first branchial sinus has an external opening below the jaw and above the hyoid bone (a bone present in the neck just above the voice box).
- Second branchial cleft sinuses present as sinus tracts with an opening on the skin of the neck during the first 10 years of life, and as cysts during the second 10 years (see Figure 1). A skin tag or abnormal cartilage may occasionally be present at the opening of the sinus, and occasionally the tract may be felt as a band in the neck.
- Third branchial cleft sinuses are extremely rare and are often located near the thyroid and along the front part of the muscle in the neck which attaches to the collar bone.
- Fourth branchial cleft sinuses are also rare and are located low in the neck similar to the third cleft sinuses.



Figure 1

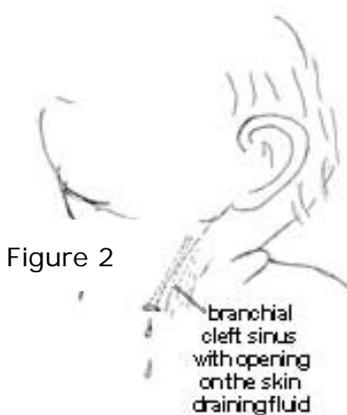


Figure 2

### *What are some common signs and symptoms of branchial cleft remnant?*

- Infection and/or drainage from small openings on the neck are common signs of branchial cleft sinuses (see Figure 2).
- Branchial cleft cysts present as swelling in the neck.

### *Is a branchial cleft remnant dangerous?*

- At times the cysts or cartilage remnant present as a small mass and removal is done to establish a diagnosis.
- Drainage of saliva from a sinus on to the neck is unsightly and can cause chronic irritation of the skin. Removal will stop this problem.
- Cysts and sinuses frequently get infected. Removal is performed to present this problem.
- Though it happens rarely, branchial cleft remnants have been the site of development of malignant tumors in adults.

***What is the treatment for branchial cleft remnant?***

- Complete surgical removal of branchial remnants should be performed.
- The operation is usually done as a day surgery procedure under general anesthesia.
- For operations done deep in the neck, an overnight stay may be needed.

***What happens after the surgery?***

- Recurrence of the cyst or sinus is possible, and it is more common when the operation is done at the time of an active infection.
- You or your child should not do any strenuous exercise for 5-7 days after the surgery.
- You or your child should not bathe until 3 days after the surgery.
- Bandage or Steri-strips® should remain in place for 5-7 days after the surgery.

***Phone Numbers to Call***

Monday – Friday 8:30am – 5:00pm	Nurses' line (617) 355-7704 Nurse Practitioners' line (617) 355-7716
Evening, Nights, Weekends, and Holidays	Page Operator (617) 355-6369 Ask for the surgeon on-call.

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Send comments or questions to: [Familyed@childrens.harvard.edu](mailto:Familyed@childrens.harvard.edu)

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