Head and Neck Sinuses and Masses

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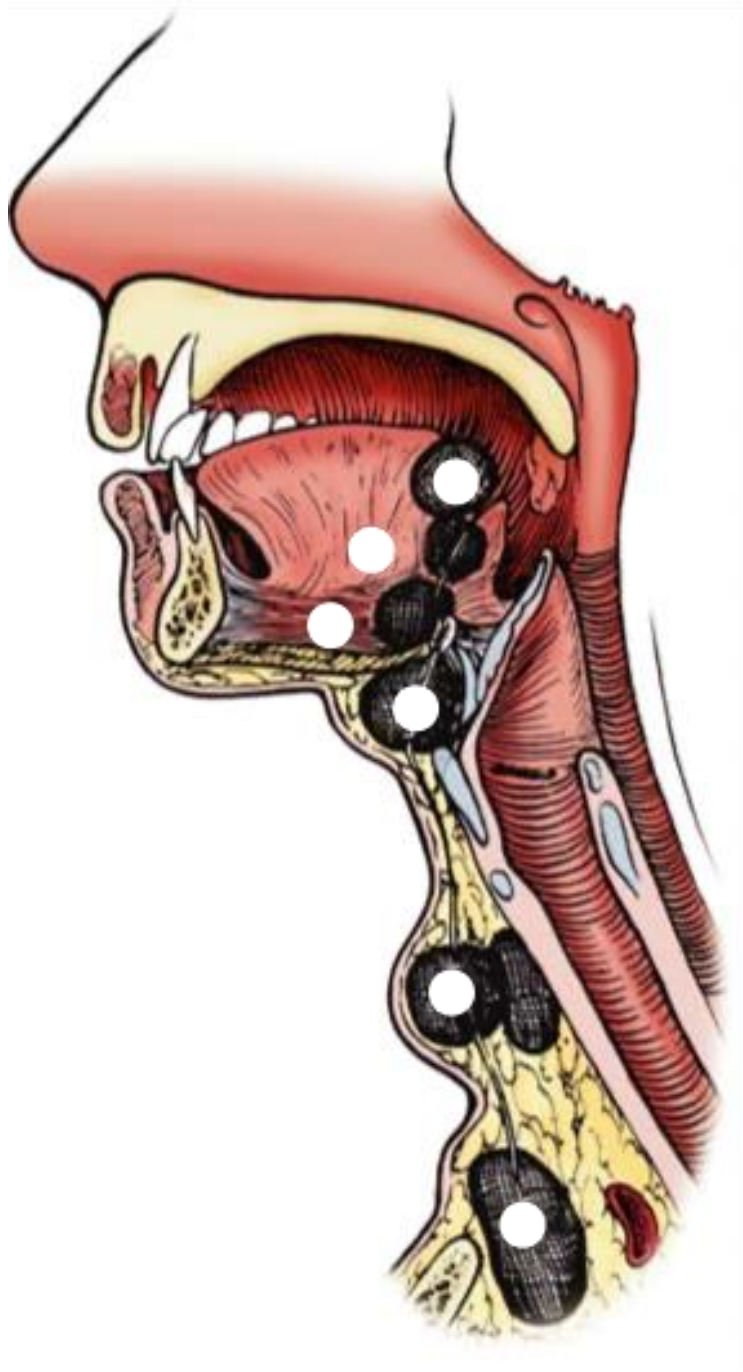
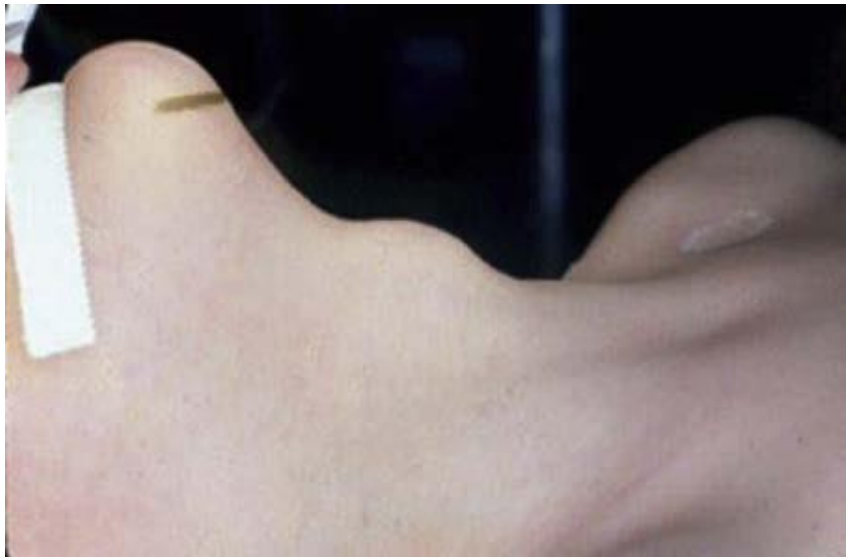
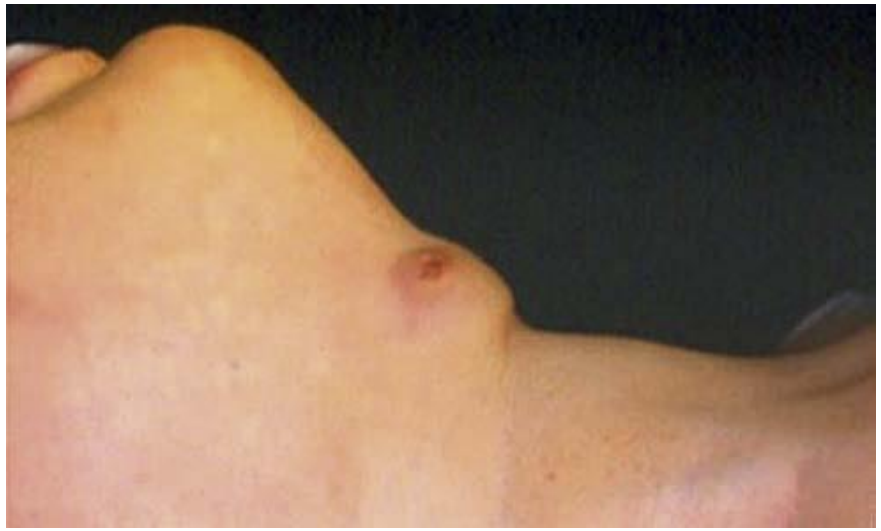
THYROGLOSSAL DUCT CYST

- midline of the neck
- Asymptomatic
- Noticed at preschool age
- thyroglossal duct may pass in front of or behind the hyoid bone, but most commonly, it passes through it
- Occasionally, the cysts attach to the pyramidal lobe or may be intrathyroidal
- Two-thirds : first three decades of life







DDx

- Suprahyoid thyroglossal cysts
- submental dermoid cysts
- submental lymph nodes

- sticks out his or her tongue: moves cephalad when the tongue protrudes

presentations

- asymptomatic
- infection

Evaluation

- History and physical examination
- If has hypothyroidism should undergo thyroid function testing and additional imaging to exclude median ectopic thyroid
- preoperative thyroid scanning or US to eliminate the possibility of an ectopic thyroid gland
- US: differentiating cysts and ectopic thyroid
- Ninety percent of ectopic thyroid tissue lies at the base of the tongue, and thyroglossal duct cysts are rarely found there.

Treatment

- Elective surgical excision
- to avoid the complications of infection and the small risk (<1%) of cancer
- excision of the cyst and its tract upward to the base of the tongue, and resection of the central portion of the hyoid bone: Sistrunk
- wide resection at the initial procedure

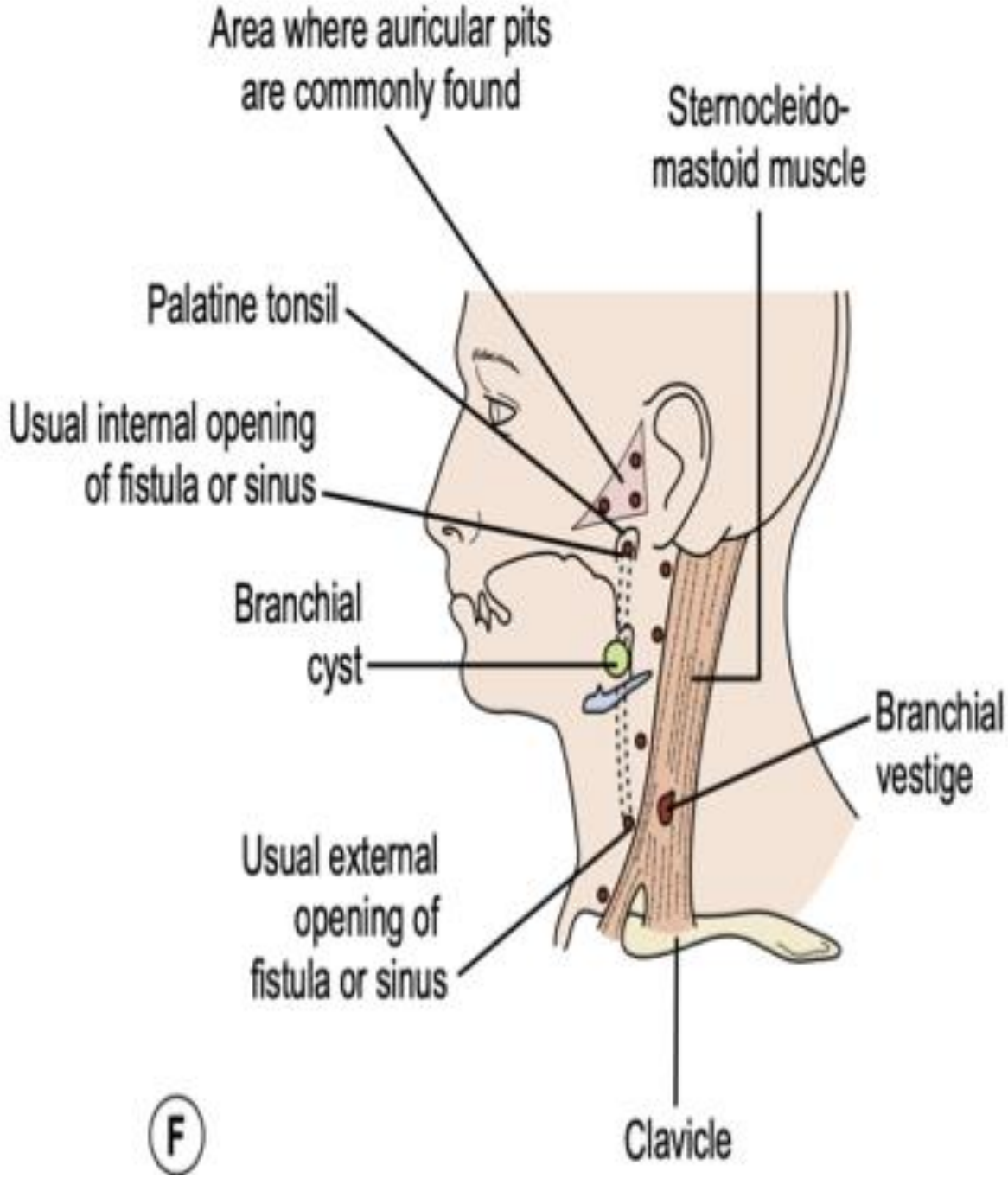
Complications

- recurrence, hematoma or abscess necessitating surgical drainage
- Infected cysts or sinuses should be initially managed by treating the infection
- *Haemophilus influenzae*, *Stahylococcus aureus*, and *Staphylococcus epidermidis*
- aspiration may be required to decompress the cyst and allow for identification of the organism, but formal incision and drainage (I&D) should be avoided
- 3 months should be allowed for inflammation to resolve prior to definitive operative treatment

- If a solid mass is found, it should be sent for frozen section analysis to exclude median ectopic thyroid

REMNANTS OF EMBRYONIC BRANCHIAL APPARATUS

- cysts, sinuses, fistulae, or cartilaginous remnants
- Complete fistulas are more common than external sinuses
- present at birth
- mucoid drainage from the ostium along the border of the sternocleidomastoid muscle (SCM)
- infected mass
- skin tags or cartilaginous remnants
- Fistulas at: pyriform sinus and tonsillar fossas


Area where auricular pits are commonly found
Sternocleido-mastoid muscle
Palatine tonsil
Usual internal opening of fistula or sinus
Branchial cyst
Branchial vestige
Usual external opening of fistula or sinus
Clavicle
F

- CT is most often used and can demonstrate a fistula in two-thirds of cases
- Barium esophagram has a 50–80% sensitivity for third and fourth branchial fistulas
- fine-needle / incisional biopsy should be avoided

Goal of treating : complete excision

- if the lesion is infected at clinical presentation, antibiotic therapy and warm soaks to encourage spontaneous drainage of mucoid plugs should precede definitive excision.
- Attempts at complete excision in an inflamed, infected field increase the risk of nerve injury and incomplete resection

- early resection to prevent infection Or wait until age 2 or 3 years
- Aspiration or limited I&D
- Complete surgical excision is delayed until the inflammation subsides

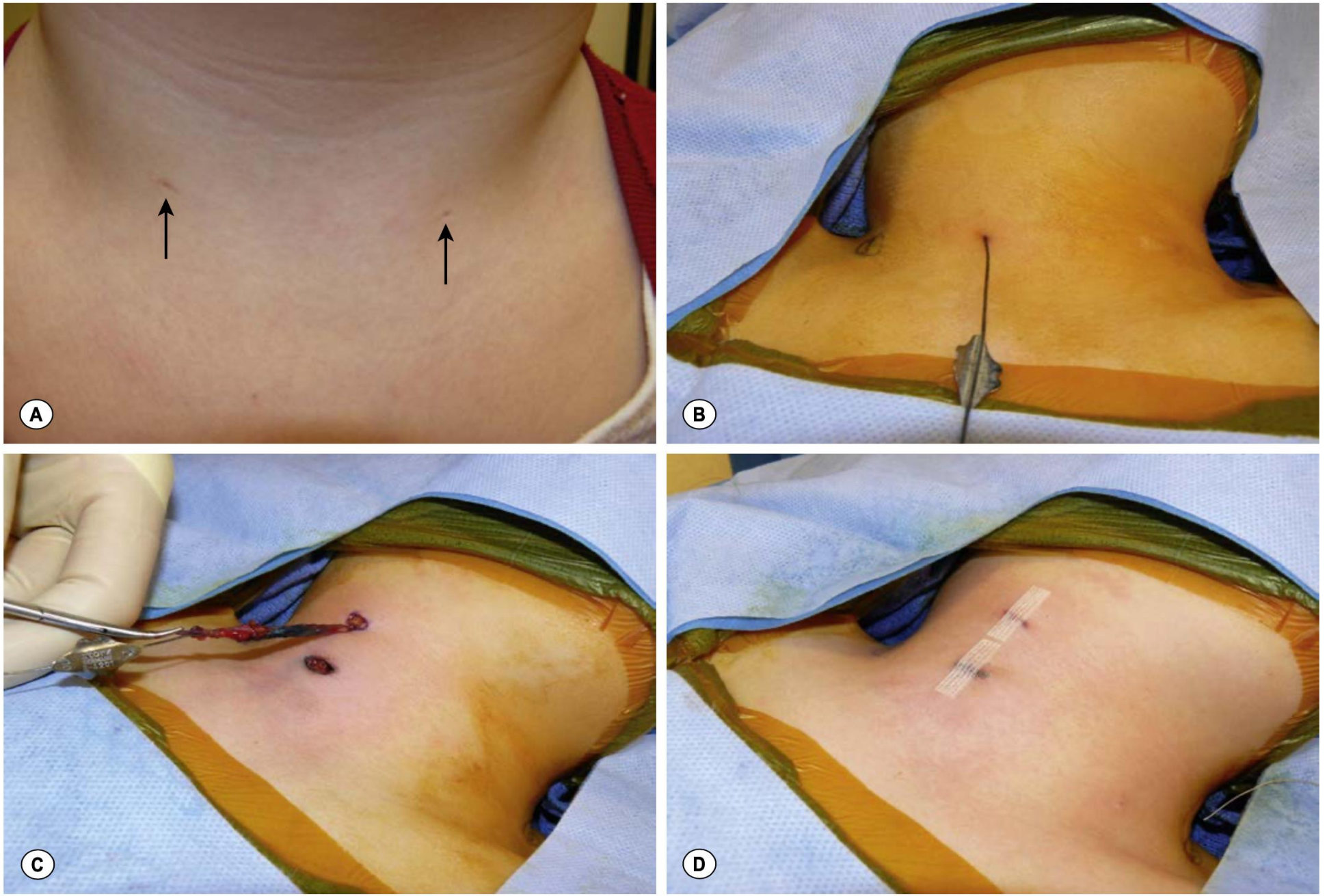


Fig. 72.5 This 6-year-old patient was referred for bilateral second branchial cleft fistulae. In **(A)**, the bilateral fistulae are identified with arrows. In **(B)**, a

First Cleft Anomalies

- Type I remnants contain only ectoderm, course lateral to the facial nerve, and present as swellings near the ear.
- Type II lesions consist of both mesoderm and ectoderm, can contain cartilage, pass medial to the facial nerve, and present as swellings inferior to the angle of the mandible or anterior to the SCM in a preauricular, infra-auricular, or postauricular position

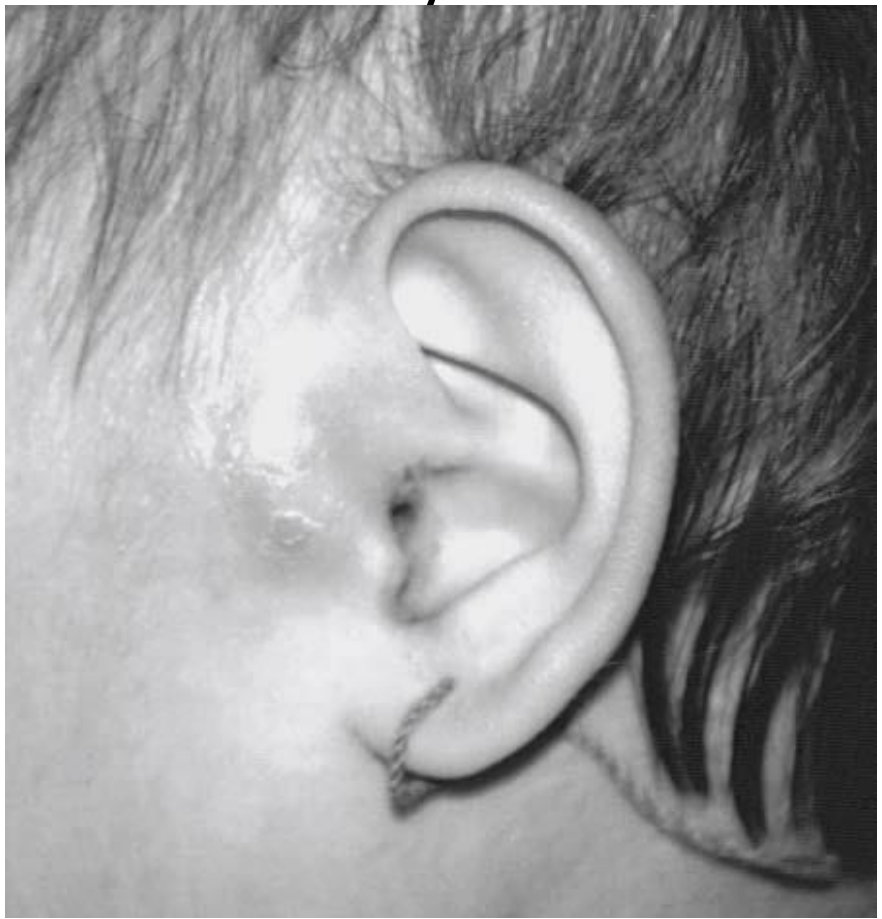
- Facial nerve injury

Second Cleft Anomalies

- anterior border of the SCM
- junction of the lower and middle thirds
- penetrates the platysma and cervical fascia to ascend along the carotid sheath to the level of the hyoid bone
- Medial to carotid
- end in the tonsillar fossa
- 95% of clefts
- 10% of second branchial remnants are bilateral

PREAURICULAR PITS, SINUSES, AND CYSTS

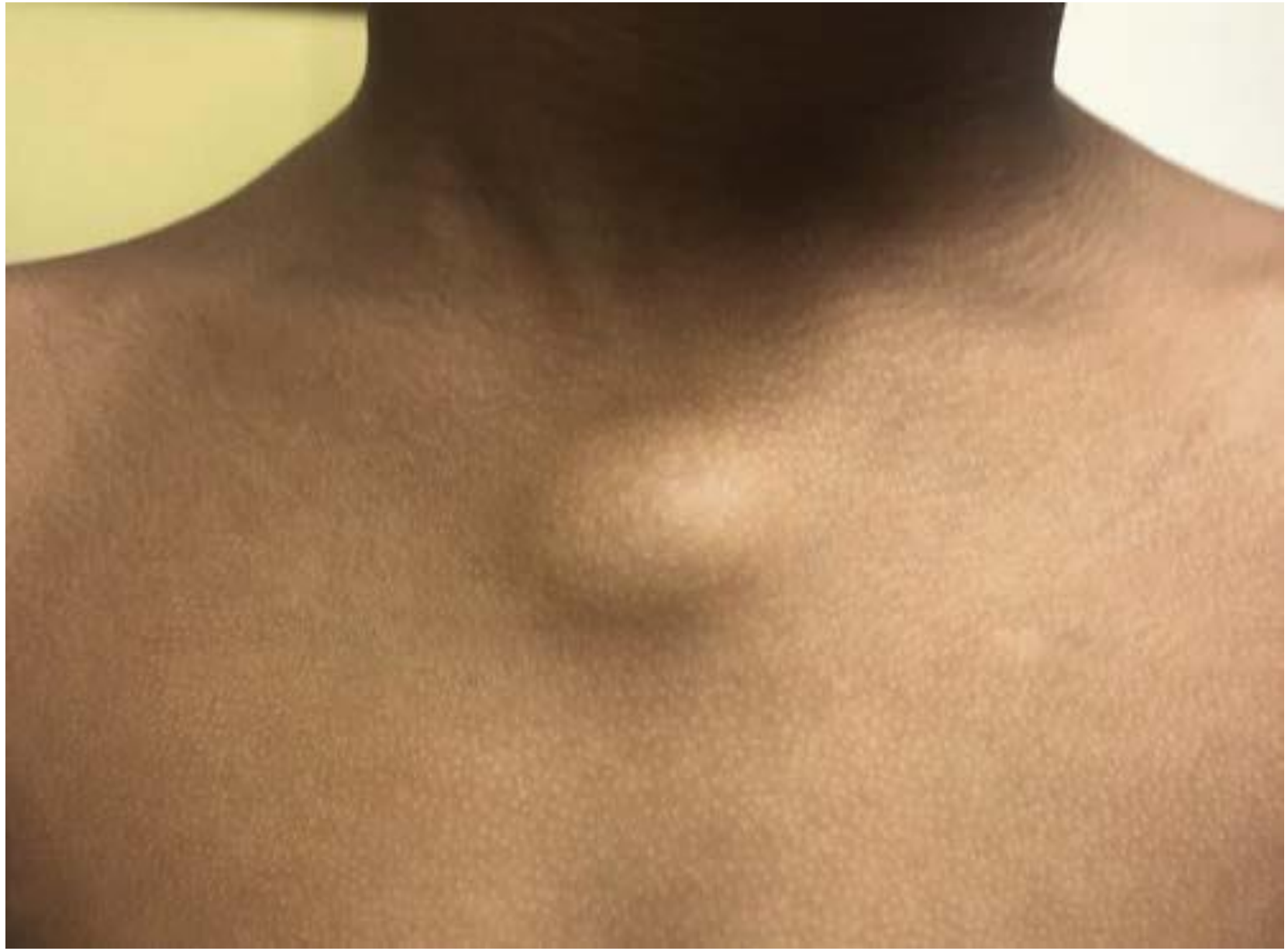
- The sinuses are often short and end blindly
- never connect internally to the external auditory canal or eustachian tube



- Excision of these preauricular sinuses is not needed unless there is a history of drainage
- Cysts should be completely excised before becoming infected
- to the level of the temporalis fascia
- If infection supervenes, the lesion is treated with antibiotics and warm soaks to encourage drainage
- I&D or needle aspiration may be required

DERMOID AND EPIDERMOID CYSTS

- supraorbital palpebral ridge
- corner of the eyebrow
- at birth or within the first 1–3 months
- Nasal dermoid cysts may present as a cyst or sin us anywhere from the glabella to the base of the columella
- The best way to evaluate for deep extension: CT and MRI
- Infection is rare
- Excision is the treatment of choice



TORTICOLLIS