



Nonsyndromic Bilateral Second Branchial Cleft Fistulae: A Case Report

Cameron P. Worden, BS; Kenan C. Michaels, BA; William P. Magdycz, MD

Virginia Tech Carilion School of Medicine

Objectives:

Branchial cleft anomalies are rare congenital malformations that result from the abnormal persistence of branchial clefts during embryogenesis and manifest clinically as cysts, sinuses, or fistulae. Identification of branchial cleft anomalies, particularly branchial cleft fistulae, are clinically important as these findings may be part of a larger syndromic clinical presentation such as the branchiootorenal syndrome, which necessitates further workup.

Materials and Methods:

Case Report

Results:

We present the case of a 50-year-old woman with recent left-sided pain, drainage, and swelling in the lower one-third of her neck. The patient reported a history of bilateral “cysts” in the lower one-third of her neck for most of her adult life, which frequently become infected and are associated with tan-colored drainage. She denied a personal or family history of renal anomalies or hearing loss. Physical exam was notable for a right sided pre-auricular pit and a left-sided branchial cleft fistula vs sinus orifice anterior to the lower third of the sternocleidomastoid with an identical spot on the opposite side of the neck that was scarred shut. Computed tomography scan with intravenous contrast of the soft tissues of the neck revealed bilateral soft tissue tracts beginning in the region of the tonsillar fossae and extending bilaterally down to the skin surface near the level of the thyroid gland, most consistent with bilateral second branchial cleft fistulae.

Conclusions:

To the best of our knowledge, there have been less than ten cases of nonsyndromic, bilateral second branchial cleft fistulae reported in the literature.



Figure 1. Left-sided branchial cleft fistula vs sinus orifice anterior to the lower third of the sternocleidomastoid.

