

## BRANCHIAL FISTULA TYPE 2 - A CASE REPORT

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### ABSTRACT

Branchial fistulas usually present as a discharging sinus in the neck with the fistula tract extending upward within the deep neck tissue. It is a result of aberrant embryonic development and are rarely seen in clinical practice. The complete excision is the main treatment. We hereby report a rare case of type 2 branchial fistula which was present since birth.

### INTRODUCTION

Second branchial cleft fistulae are congenital anomalies of embryonic development of branchial apparatus with the external cutaneous ostium in the lateral neck connecting to the tonsillar fossa. They can be diagnosed as a result of typical clinical presentation and the diagnosis can be confirmed various imaging modalities, including fistulography, ultrasound, CT and MRI.

Among the Branchial cleft anomalies, second-cleft lesions comprise 90–95% of all branchial cleft anomalies.<sup>[1]</sup>

These anomalies can present as true fistulae, sinus tracts, complete isolated cysts, or cartilaginous remnants.<sup>[2]</sup>

Patients with fistulae often present with mucoid drainage from a lateral neck opening that may become infected over time. Given that these patients are at risk for recurrent infection that may lead to abscess formation, definitive management consists of complete surgical excision of the fistula tract.<sup>[3]</sup>

### CASE REPORT

A 3 month old presented with history of small pinpoint external opening over the neck with intermittent discharge of mucous from the opening since birth. The examination revealed a fistulous tract with mucous discharges from the cutaneous opening at the lateral neck. (Figure 1) There was history of recurrent attacks of inflammation, particularly after a preceding upper respiratory tract infection. On the basis of history and clinical examination diagnosis of branchial fistula was made.



**Figure 1.**

### DISCUSSION

The second branchial cleft fistulae typically open onto the skin at the anterior border of sternocleidomastoid at the junction of middle and lower  $\frac{1}{3}$ .<sup>[4]</sup>

Anatomically, a typical second cleft fistula has its external opening at the anterior border of sternomastoid at the junction of middle and lower  $\frac{1}{3}$ rd. Second arch anomalies are classified into four types: Type I lesions lie anterior to the sternocleidomastoid muscle (SCM) and do not come in contact with the carotid sheath. Type II lesions are the most common and pass deep to the SCM and either anterior or posterior to the carotid sheath. Type III lesions pass between the internal and external carotid arteries and are adjacent to the pharynx. Type IV lesions lie medial to the carotid sheath close to the pharynx adjacent to the tonsillar fossa.<sup>[5]</sup>

Our cases had the type II pattern.

The treatment modalities include use of sclerosing agents; excision of the fistulous tract. The complete excision is the main treatment modality.

In conclusion the rarity and varied presentations of the branchial fistulas have led to frequent misdiagnosis. High index of suspicion is required. The careful examination and dissection are crucial to avoid rest of the anomalies.

**Conflict of interest-** nil.

#### **REFERENCES**

1. Kajosaari L, Makitie A, Salminen P, Klockars T. Second branchial cleft fistulae: patient characteristics and surgical outcome. *Int J Pediatr Otorhinolaryngol*, 2014; 78(9): 1503–7.
2. LaRiviere CA, Waldhausen JH. Congenital cervical cysts, sinuses, and fistulae in pediatric surgery. *Surg Clin North Am.*, 2012; 92(3): 583–97.
3. Reddy, A., Valika, T. & Maddalozzo, J. Definitive surgical management for second branchial cleft fistula: a case series. *J of Otolaryngol - Head & Neck Surg*, 2020; 49: 55.
4. Gold BM. Second branchial cleft cyst and fistula. *AJR Am J Roentgenol*, 1980; 134(5): 1067-9.
5. Stephanie P, Acierno, John HT, Waldhausen. Congenital cervical cysts, sinuses and fistulae. *Otolaryngol Clin North Am*, 2007; 40: 161-76.