



## Bilateral second branchial cleft anomaly: Diagnosed on computed tomographic fistulography

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### Abstract

A 6 year old male patient presented with external discharge from skin openings in the neck on both sides of midline since birth. On local examination, external pitting was seen in the bilateral anterior cervical spaces, along the anterior aspect of sternocleidomastoid muscle [Figure 1]. Computed tomographic (CT) fistulography was performed on a 16 slice CT scanner (Brilliance CT, Philips, The Netherlands). Bilateral external openings were cannulated using a 20G needle followed by instillation of water soluble, iodinated, nonionic contrast medium (iohexol, 300 mg/mL), using a 5 cc syringe. Intravenous iodinated contrast was also given during the study. CT fistulography showed opacification of a linear tract on the right side extending superiorly from external opening [white arrow in Figure 2]. The tract ran posterior to the submandibular gland and anterior to the carotid vessels and ended in the parapharyngeal fat just above the hyoid bone [Figures 2 and 3]. No evidence of communication with pharyngeal mucosal space was seen. On the left side, pooling of contrast was seen in a small collection just deep to external opening [curved arrow in Figure 2]. A linear, unopacified, hypodense tract was also seen on the left side extending superiorly from the collection, running parallel to the tract on the right side [blue arrow in Figure 2]. Based upon these findings, a diagnosis of bilateral second branchial cleft anomaly was made (branchial sinus). Branchial arch anomalies are common congenital

head and neck lesions in children and may present as cyst, sinus, fistula, or cartilaginous remnant. Second branchial cleft anomalies are the most common. They may occur anywhere along the course of the second branchial arch tract which extends from the skin in supraclavicular fossa, between internal and external carotid arteries till pharynx at the level of tonsillar fossa.[1,2] Radiological examination of the branchial cleft anomalies is essential for accurate classification and management. Conventional fluoroscopic fistulography is commonly used for imaging evaluation of branchial cleft anomalies. However, CT fistulography offers better delineation of tract due to its multiplanar capabilities and also depicts the relation of tract to the surrounding structures.[3] Further, the cross sectional imaging can demonstrate the unopacified portion of the tract in rare cases (as in this case). Declaration of patient consent The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

### Biography

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**Note :** This work was partially presented at 3rd World Congress on Radiology and Oncology, April 08-09, 2019 Abu Dhabi, UAE

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