

## Clinical Brief

# Congenital Imperforate Submandibular Duct in a Newborn

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## ABSTRACT

Varried conditions such as ranula, epidermal/dermal inclusion cyst, lymphatic cyst, thyroglossal cyst, sialolithiasis, branchial cleft cyst are known to produce swelling in the floor of mouth. Rarely imperforate or duplication anomaly of submandibular duct may produce cystic lesion in the floor of mouth. We present a case of congenital imperforate submandibular duct with cyst formation in a newborn. We also review the literature regarding management. [*Indian J Pediatr* 2007; 74 (7) : 59-60]  
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**Key words** : Imperforate submandibular duct; Cyst; Floor of mouth

The differential diagnosis of cyst like swelling in the floor of the mouth should include sialolithiasis, mucous retention phenomenon (mucocele, ranula), dermoid and epidermal inclusion cyst, thyroglossal duct cyst, branchial cleft cyst, hemangioma, lymphangioma, cystic hygroma, lipoma, and occasionally pleomorphic adenoma. Rarely congenital imperforate submandibular duct<sup>1</sup> (Fig. 1) (Wharton's duct) or duplication anomaly<sup>2</sup> may produce cystic lesion in the floor of mouth at birth. We present a case of congenital cyst in the floor of mouth of a newborn due to imperforate right submandibular duct. We also



Fig. 1. Floor of mouth showing Right submandibular duct cyst.

review the literature and outline management options.

## CASE REPORT

Healthy full term male baby, product of spontaneous vaginal delivery to 26 yr old mother (gravida 3, para2), weighing 2850gms noticed to have a pearly white swelling in the floor of mouth on day 1 of life, measuring 4×3 mm<sup>2</sup> and situated to the right side of the midline. Opening of right submandibular duct was closed, left submandibular duct opening being normal. There was no discharge from the swelling. Although transillumination test was not possible due to the small size of the cyst, it was milky white in colour. Tongue and rest of floor of mouth, sub mandibular glands were normal.

Cyst was managed by longitudinal incision crossing proximally in to the submandibular duct. Milky white fluid expressed and baby was allowed oral feeds.

At 6 mth post op. baby is doing well with no recurrence of cyst. The right submandibular duct has a patent opening.

## DISCUSSION

Congenital cystic swelling in relation to submandibular duct may arise rarely in a newborn due to imperforate submandibular duct opening, atresia or duplication anomaly of Wharton's duct.<sup>1,3</sup> Failure of canalization of the terminal end of the duct has been cited as the cause of

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this anomaly.<sup>1</sup> Mostly reported cases have been unilateral swellings manifesting at birth. Diagnosis is made primarily by physical examination, rarely magnetic resonance imaging is requested to outline ductal anatomy to diagnose duplication anomaly.



Fig. 2. Following incision and decompression of cyst.

Treatment includes simple incision and decompression of cyst, (Fig. 2) marsupialisation with or without ductoplasty or excision of duplication anomalies. Care should be taken to extend the incision proximally into the patent submandibular duct in all cases. Early treatment is important to avoid feeding difficulties and to prevent later complications such as ranula or sialadenitis. Patient should be followed up for any recurrence of cyst, in which case excision and ductoplasty would be required for permanent cure.

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