



## Bilateral Nasolabial Cyst: A Case Report

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### Abstract

**Introduction:** Bilateral Nasolabial Cyst (NLC) is a very rare occurrence and only 38 cases are described in the Literature.

**Case Report:** A 26 years old woman presented with swelling on the left nasolabial fold. Orthopantomography (OPG) did not detect bone lesions while CT scan revealed the presence of an extra-bone growth cyst compatible with an NLC. This examination also revealed the simultaneous presence of a right NLC that had not yet manifested clinically. The patient underwent surgical enucleation of the two cysts. The histological examination confirmed the diagnosis of LNC.

**Conclusion:** In the diagnostic suspicion of NLC it is always essential to go beyond the usual clinical examination and OPG, and always rely on a second level exam like CT scan. This more specific exam allows the physicians to understand the anatomy of the lesion excluding the simultaneous presence of still asymptomatic contralateral lesions.

**Keywords:** Nasolabial cyst; Bilateral nasolabial cyst; Lacrimal duct cyst; Maxillary cyst; Non-Odontogenic cyst

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Received Date: 07 Jul 2021

Accepted Date: 02 Aug 2021

Published Date: 05 Aug 2021

#### Citation:

Petrocelli M, Ruggiero F, Constabile E, Cutrupi S, Feraboli LGF, Fabbri VP, et al. Bilateral Nasolabial Cyst: A Case Report. *World J Surg Surgical Res.* 2021; 4: 1318.

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### Introduction

Nasolabial Cyst (NLC) is a rare non-odontogenic, developmental cyst affecting the soft tissues of the mouth upper vestibule. NLC constitutes about 0.7% of all cysts of the jaws and about 320 cases are reported in the Literature. NLC is more frequent in middle aged females, with a peak incidence in the 4<sup>th</sup> decade of life. It is usually asymptomatic and drawing the attention when large enough to cause upper lip swelling. Commonly, NLC is unilateral, while bilateral lesions are extremely rare and only 38 cases are reported in the Literature so far. We hereby describe a case of bilateral NLC in which only one of the lesions was clinically evident. The contralateral lesion was an incidental finding diagnosed on Computed Tomography (CT) scan.

### Case Presentation

#### Description of the technique and materials

A 26 years old woman presented up at Maxillo-facial Unit Bellaria-Maggiore Hospital of Bologna outpatient clinic after being admitted at the Accident and Emergency Unit complaining of swelling on the left nasolabial fold, started 8 months earlier and gradually increasing in size. She did not report any nasal trauma and or surgery in her clinical history. The swelling had an indolent onset, without occurrence of facial pain and temperature raise, increasing in size especially during the last 2 months. The general practitioner had prescribed her, unsuccessfully, wide spectrum antibiotic therapies, suspecting an abscess of odontogenic etiology. On external examination the patient presented asymmetry of the nasolabial folds (Figure 1), with elevation of the left nasal floor which was evident at the anterior rhinoscopy causing an airflow obstruction. Intraoral examination revealed a restriction of the left upper vestibular fornix (Figure 1). The lesion was roundish, with a fluctuating texture, covered by non-ulcerated mucosa. No spontaneous or caused pain was evident. Rhinoscopy showed a partial obstruction of the left nasal nostril due to the mass, without causing any alteration of the nasal mucosa. Orthopantomography (OPG) did not show bone lesion



Figure 1: Extraoral and intraoral presentation.

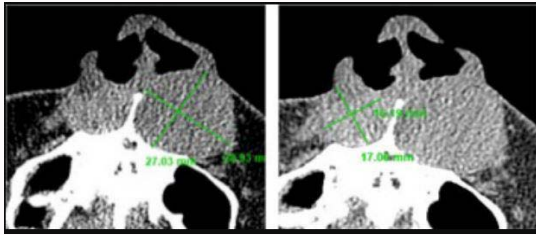


Figure 2: CT scan presentation.



Figure 3: Intraoperative view.

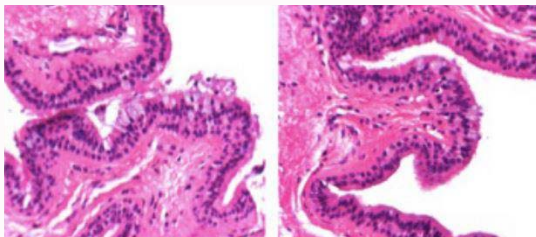


Figure 4: histological features, the cyst wall are constituted by pseudostratified ciliated epithelium with goblet cells.

or a direct involvement of the roots of the upper frontal group. CT scan revealed the presence of two, round, hyperdense lesions. The larger lesions, located on the left side, measured 27 mm × 38 mm, the smaller one, right located, measured 17 mm × 18 mm (Figure 2). On the left side, the lesion was located very close to maxilla bone cortex, which resulted imprinted. Both lesions appeared to grow in continuity with the homolateral nasal inferior turbinate. The patient underwent surgical excision of both cysts under general anesthesia (Figure 3). We practiced an incision in the upper fornix. Then we proceeded with a smooth dissection until the maxillary bone was reached. Both lesions were intimately connected to the nasal floor, overcoming it to the turbinates. Both lesions were resected and submitted for pathological examination. At the end of the procedure nasal pack was positioned. Oral mucosa access was sutured in resorbable suture. Tissues submitted for histological examinations were fixed in buffered formalin and paraffin embedded according to routine procedures. From each block, sections were cut and stained

with Hematoxylin-Eosin. On histology, both cysts were lined by pseudostratified ciliated epithelium, mainly composed of cylindrical cells intermingled with goblet cells. The cyst wall was composed of connective tissue. No atypia or mitoses were present (Figure 4). The patient was discharged the day after surgery with an uneventful course; antibiotic and corticosteroid therapy continued at home. The nasal pack was removed before discharge without any hemorrhagic episode. Intraoral sutures were removed 15 days after surgery, whilst the soft tissue edema self-resolved after one month.

## Discussion

NLC first description dates back to the 1882 [1]. Bilateral nasolabial cyst is a rare condition that occurs in less than 10% of the cases of NLC and only 38 cases are described in the Literature [2]. The pathogenesis remains controversial. In 192, Bruggeman hypothesized that bilateral NLC may arise from the epithelial remnants of the lower anterior nasolacrimal ducts [3]. Commonly, clinical appearance is a painless swelling with progressive onset of the nasolabial fold. NLC frequently causes elevation of the nasal floor mucosa resulting in partial obliteration and obstruction of the homolateral nasal cavity. The size of the cyst may range from 1 cm to 10 cm [4]. Differential diagnosis should include inflammatory odontogenic cysts, radiological examinations are therefore mandatory to complete the clinical evaluation. Since NLC grows outside the maxillary bone, OPG is completely negative and useful only for making differential diagnosis with odontogenic cysts with extra-osseous extension. To integrate clinical information, the execution of a CT scan is mandatory to define and anatomically localize the cyst [1-3]. Furthermore, in the present case, the CT scan allowed the diagnosis of the right nasolabial cyst, which would have gone unrecognized by the only clinical examination. On radiology imaging, generally the NLC appears to be located anteriorly to the premaxilla, as a hyperdense round lesion, filled with fluid. Histological examination, evidencing a ciliated respiratory epithelium, with goblet cell metaplasia, is helpful in the differential diagnosis with odontogenic cysts. Since its first description, many surgical approaches have been described for the treatment of NLC: Radical surgical excision, cyst aspiration, marsupialization, sclerotic agents injection, enucleation after marsupialization [1,2]. However, surgical excision or eradication after marsupialization gathered the lowest recurrence rate [5]. This paper presents a rare case of bilateral nasolabial cyst misdiagnosed at the right side. In our opinion, it is always essential to go beyond the usual clinical examination and OPG, and always rely on a second level exam like CT scan. This more specific exam allows the physicians to understand the anatomy of the lesion excluding the simultaneous presence of still asymptomatic contralateral lesions.

## Clinical Relevance Statement

Due to exceptionality of the findings, as the second cyst was an accidental discover, we strongly suggest to perform secondary imaging like CT scan when considering a patient with nasolabial cyst.

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