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Surgical Treatment of Macrostomia in Tessier Slit No. 7: A Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Summary: Macrostomia also called maxillomandibular cleft or lateral cleft or commissural cleft or transverse cleft is one of the so-called rare facial clefts as opposed to the labioalveolopalatine clefts. They are unilateral in 80% of cases without significant predominance of the affected side and often in a polymalformative setting.
We report the case of a patient with otomandibular syndrome with macrostomy and therefore part of tessier no. 7 clefts.
There are several surgical techniques to treat macrostomia, but for this patient we opted for the Préau method to restore the normal anatomy of a labial corner while respecting the 3 planes: mucosal, muscular and cutaneous. The advantage of this technique is to minimize scarring.

Keywords: Craniofacial malformations; congenital macrostomia; tessier cleft 7; linear commissuroplasty.

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1. INTRODUCTION

Cleft 7 of Tessier, or commissural cleft or macrostomy is also called lateral or transverse or maxillomandibular or temporo-zygomatic cleft, because it passes between these 2 bones (Fig. 1). They are rarer than classic cleft lips and palates and can also occur in a polymalformative context. Their reported incidence ranges from 1 in 60,000 to 1 in 300,000 live births.

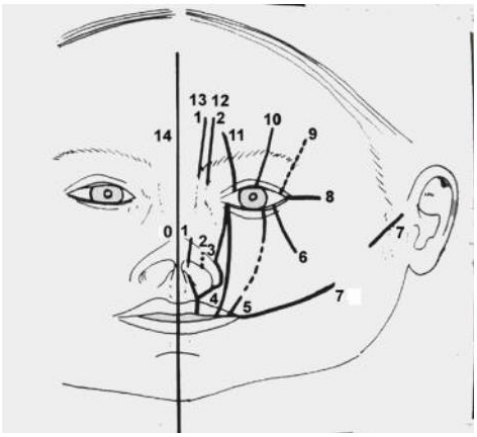

Fig. 1. Tessier classification [8]

This is the most common Tessier cleft. They are in 80% of cases unilateral, without significant side predominance, and therefore bilateral in 20% of cases. It is the only Tessier slit that is unrelated to the orbit. This is a lateral slit starting from the corner and heading towards the tragus [1,2]. There is a clear boundary between the skin and the mucosa along the entire path of the cleft. The form may be moderate, barely visible at rest, and become evident during mimicry [3,4].

It can be found in 1st and 2nd arch syndromes, and particularly in otomandibular dysplasia. There are often associated auricular anomalies (microtia, agenesis, etc.) and malformations such as pretragial enchondromas [5].

The principle of treating cleft 7 is to recreate the lip corner; by properly repairing the orbicularis oculi muscle, create a new commissure and ensure good skin and mucosal closure. The bilateral forms must be operated in one step, for reasons of ease of equilibration [6]. In unilateral forms, the commissural point is found by comparison and measurement in relation to the healthy side [7].

2. CASE PRESENTATION

This is a 21-month-old infant, from a non-consanguineous marriage, with no notion of a similar history in the family, he was brought for consultation by his mother for difficulty with lip incontinence and for his facial asymmetry.

On physical examination we note facial asymmetry made up of several facial malformations such as wide unilateral transverse cleft lip, sagging left cheekbone, microtia and absence of the external ear canal, shortening of the lower level of the left face, nodular lesion of the left cheek enchondroma type (Fig. 2).

Facial CT revealed multiple malformations ipsilateral to the cleft consisting of hypoplasia of the mandibular ramus, absence of the coroneum and a reduced zygomatic arch (Fig. 3)

So in total our patient presents an otomandibular syndrome.

We classified the patient's macrostomia as type 1 or minor commissural cleft (Fig. 4) where the lips of the cleft side end anterior to the anterior edge of the masseter [6].

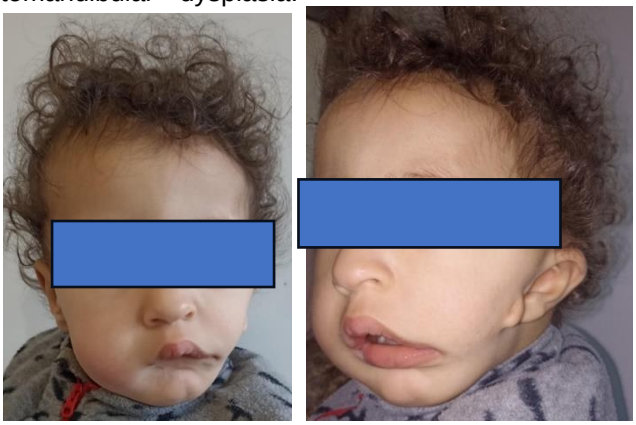

Fig. 2. Photos of the patient showing the malformations of cleft 7

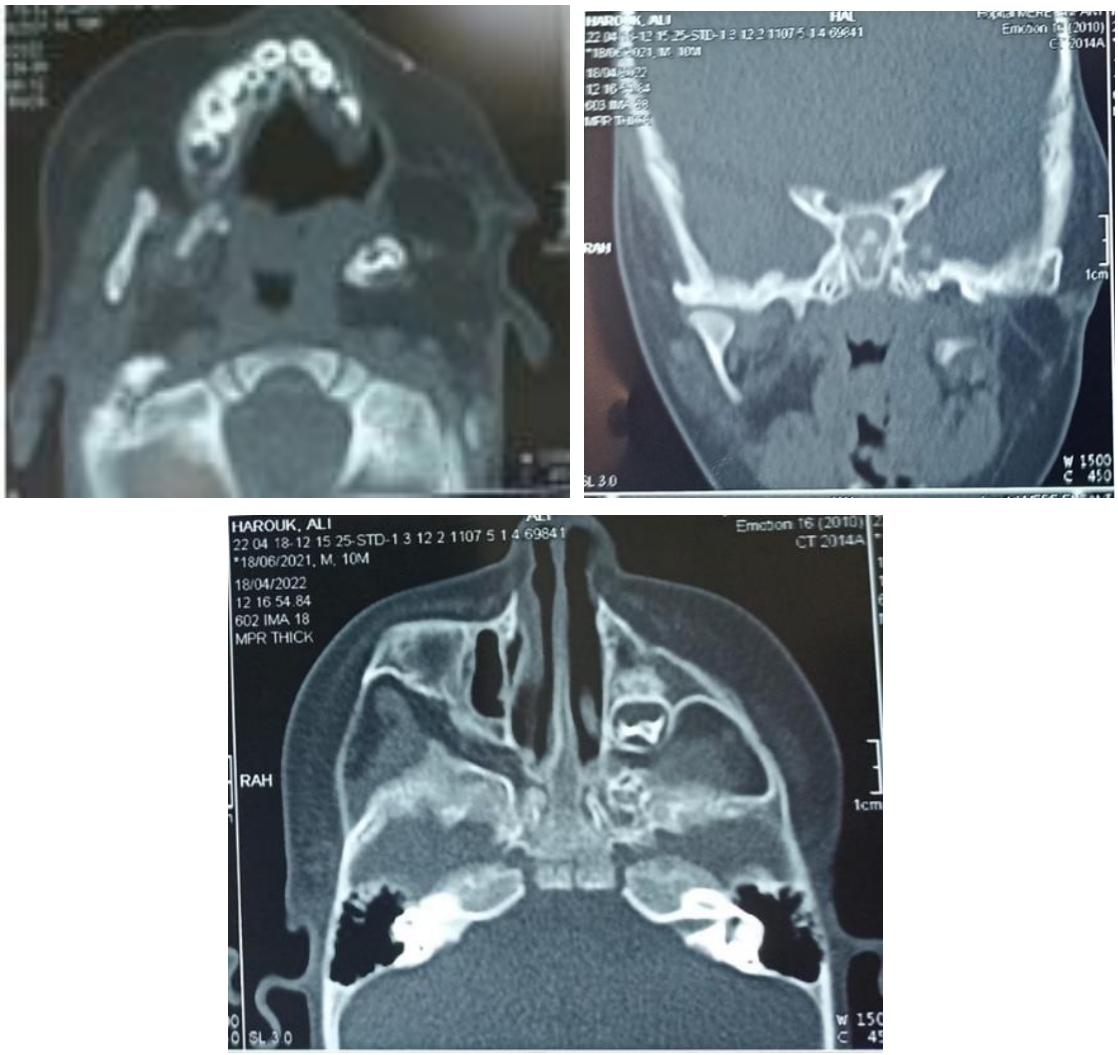

Fig. 3. Facial CT imaging results

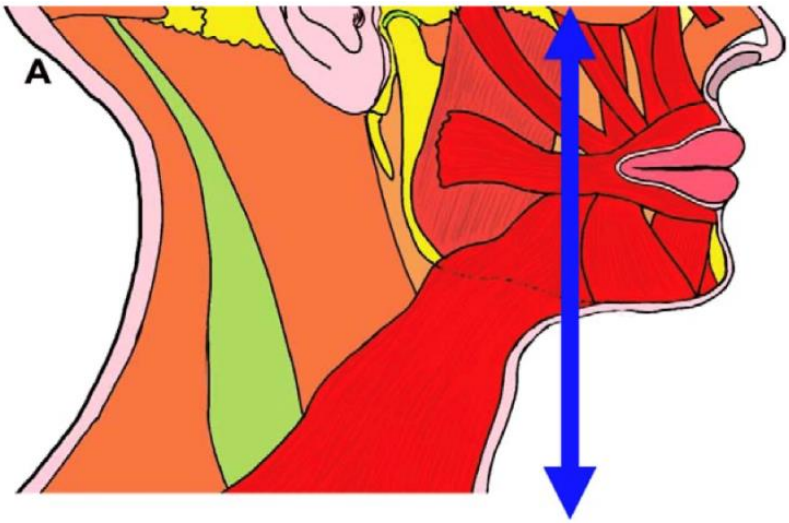

Fig. 4. Type I commissural slot stopping in front of the anterior edge of the masseter

Our team opted for a linear commissuroplasty with restoration of muscular continuity according to the Préau process: (Fig. 5)

- Identification of the neo-commissure
- Incision and dissection of the 3 planes: skin, muscle and mucosa, referring to the landmarks
- Identification of the two heads of the orbicularis muscle and suture after a plastic surgery using the preaux procedure.
- Redocking of the two heads of the orbicularis muscle and the modiolus.
- Excision of two mucosal triangles of the vermillion and direct cutaneous and mucosal suture ensuring a discreet linear scar in the extension of the axis of the two lips.

Note that in this patient, we took advantage of the fact that he was under general anesthesia for the excision of the left pre-auricular fibrocartilaginous lesion process.

The postoperative course was simple without local signs of infection or discharge.

The clinical results at 6 months postoperatively were satisfactory, the patient has an oral cleft of normal size, good lip continence and the surgical scar is linear and barely visible.

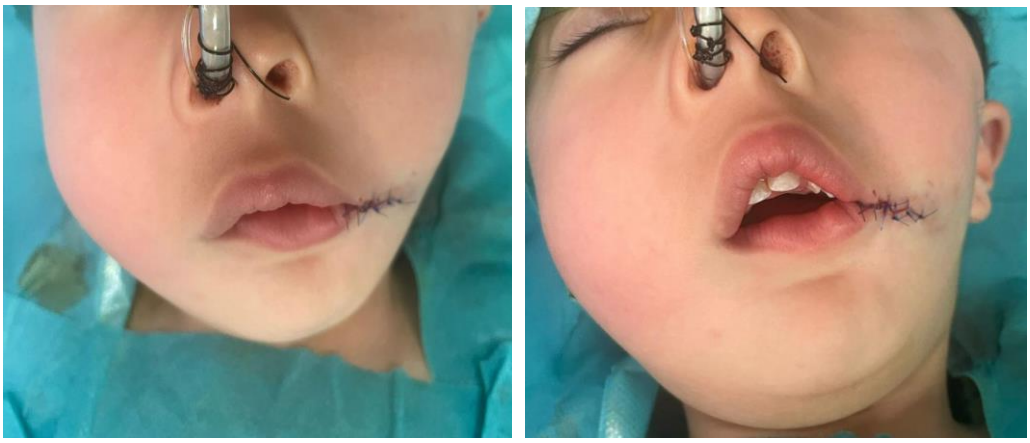

Fig. 5. photo of the patient immediately post-operatively on the operating table

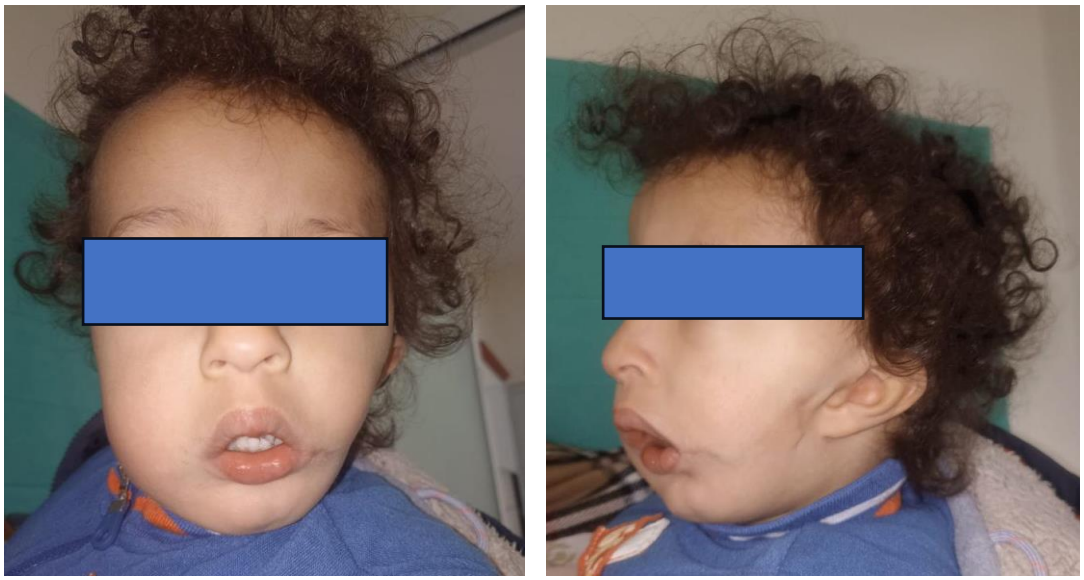

Fig. 6. appearance of the patient 6 months postoperatively

3. DISCUSSION

Unilateral commissural clefts are rare, especially Tessier's No. 7 clefts, compared to cleft lip and palate which are quite common. In our context they are extremely rare.

According to literature data and a comparative study of 10 cases carried out by Gleizal et al. [9], there is no sexual predominance unlike cleft lip and palate which are more common in males.

Clinically, congenital macrostomies are unilateral in 80% of cases, and they are minor in 93% and this is consistent with our data.

In 89% of cases, unilateral forms will be associated with other facial malformations such as fibrochondromas (found in our patient), most often pre-auricular and sometimes jugal following the path of fusion of the maxillo-mandibular buds. In addition to auricular shape anomalies such as microtia, agenesis or supernumerary ear. Bone anomalies are also frequently associated: 58% of cases in the mandible (otomandibular syndrome) and 13% of cases in the maxilla.

The management of macrostomies is always surgical, which will include mucosal repair, orbicular myoplasty and a linear or Z-shaped skin suture. Wide Z-plasties are described by Mansfield and give poor aesthetic results requiring large undercuts [10].

4. CONCLUSION

Congenital macrostomia is a rare pathology and deserves early treatment in order to restore the functional, aesthetic and psychological problems that it promotes.

Unilateral forms are often associated with other facial malformations and also require early treatment and close monitoring.

CONSENT

As per international standard, parental written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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