Case Report

Closure of an oronasal fistula with a myomucosal upper lip flap

Fechamento de fístula oronasal com retalho miomucoso labial superior

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■ **ABSTRACT**

Introduction: Palatal fistula is the most common complication after palatoplasty, and its presence entails various implications. Its presentation is diverse and repair can be difficult, which is reflected in the existence of a numerous surgical techniques described for its treatment. **Objective:** To report the surgical correction of palatal fistula with a myomucosal upper lip flap, along with a brief review of the literature. **Case Report:** The patient underwent repair of complete cleft palate. At the immediate postoperative time, an anterior fistula of the hard palate and alveolar process was present and was subjected to a correction with an oronasal myomucosal upper lip flap. The patient progressed satisfactorily, without complications or lesion recurrence after 1 year of follow-up. **Conclusion:** The technique presented is a simple and efficient method for correction of an anterior palatal fistula.

Keywords: Palatoplasty/complications; Palatal fistula; Myomucosal upper lip flap.

■ **RESUMO**

Introdução: A fístula palatina é a complicação mais frequente após palatoplastias e sua presença traz diversas implicações. Sua apresentação é diversificada e seu reparo pode ser difícil, o que se traduz na existência de uma diversidade de técnicas cirúrgicas descritas. **Objetivo**: Relatar a correção cirúrgica de fístula palatina anterior com retalho miomucoso labial superior, além de fazer uma breve revisão da literatura. **Relato de caso**: Paciente submetido à correção de fissura palatina completa, apresentando, no pós-operatório mediato, fístula anterior de palato duro e processo alveolar, submetido à correção da fístula palatina oronasal com retalho miomucoso de lábio superior. O paciente evoluiu satisfatoriamente, sem complicações e sem recidiva da lesão após um ano de seguimento. **Conclusão**: A técnica em questão mostrou-se simples e eficiente, prestando-se à correção da fístula palatal anterior.

Descritores: Palatoplastia/complicações; Fístula palatina; Retalho miomucoso labial superior.

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INTRODUCTION

Cleft lip and cleft palate are congenital deformities that have a variable incidence in Brazil; however, they are estimated to occur in approximately 1 in 650 live births[1], and therefore has public health importance.

The most common defect in the hard palate after a surgical repair is the fistula[2]. Fistulae occur more frequently after palatoplasty owing to the complete clefts of the primary and secondary palate rather than an isolated cleft of the secondary palate. Fistulae are caused by infection, a hematoma between the oral and nasal mucous membrane, excessive tension during repair, the presence of a dead space between the mucous membranes, and/or an inadequate technique.

They can be classified, in terms of size, into small (up to 5 mm—minimum defects usually in the midline and, in most cases, asymptomatic), large (between 5 mm and 2 cm—usually located in the midline and more often in the hard palate, and are always symptomatic), and huge (>2 cm—may result in distal necrosis of the flap and have, in general, large bone sequestration). Concerning anatomical location, they can be found in the lingual alveolar process, hard palate, the junction of hard and soft palate, and soft palate[3].

Fistulae are usually small and become obvious within a few weeks after the primary repair; occasionally, they may result in an expansion of orthodontic dental arches (in fact, an extension of a preexisting lesion). Large defects that affect speech or allow the escape of fluids or particles of solid food through the nose must be closed early. When the fistula is small and without functional significance, its closure may be delayed by several years, if performed at all[4].

CLINICAL CASE

The patient (A.R.S., male) is 38 years old, has brown skin, and was submitted to the correction of a complete cleft palate with the Veau technique. The repair resulted in a large fistula (1.6 cm ´ 0.7 cm at its largest diameter) in the anterior hard palate and alveolar process (Figure 1), which was corrected with a myomucosal flap from the upper lip. In the technique used, after marking, the nasal lining was rebuilt with the construction of a local partial skin flap bilaterally and parallel to the opening of the fistula; then, the myomucosal lip flap was elevated to correct the palatal defect (Figure 2). The patient had no complications or recurrences during the follow-up period of 1 year.

DISCUSSION

A palatal fistula is the most common complication after palatoplasty, and its presence entails various implications. Its presentation is diverse and repair can be difficult, which is reflected in the existence the diverse techniques described for its correction. The use of a mucosal lip flap is an old technique and was already reported by Rosenthal in 1917, who described the use of a mucosal flap from the upper lip groove to close a large anterior palatal defect[5]. In 1980, Rintala[6], followed by other authors, used a mucosal lip flap for the closure of anterior palatal fistulae; however, it was a random flap, which limited its length. It should be noted that, in 2006, a flap modification that included the underlying muscles (making it more robust and with better vascularization), based on the terminal branches of the superior labial artery, was reported by Sarabahi & Tiwari[7].

Figure 1. Defect involving the anterior aspect of the hard palate and alveolar process.

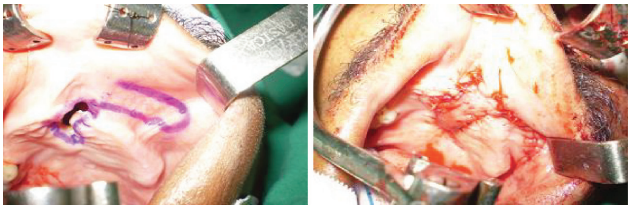

Figure 2. Marking of the myomucosal upper lip flap and final postoperative aspect.

The closure of defects between the oral and nasal cavities must always be made in two planes[8], and this can be achieved with various techniques. Although infrequent, the use of an occlusive prosthesis may be the solution for defects that cannot be closed with local tissues because of their size or the patient's preference[4].

Anterior palate fistulae have been closed by conventional methods with local, regional, or distant tissue[9]; for small defects, the more frequently used flaps are hinge flaps, alone or in conjunction with forward, rotation[1], or island[10] flaps.

In large fistulae, a successful management with lingual flaps was first demonstrated by Guerrero-Santos & Altamirano[11]. However, this has the disadvantage of being a two-stage procedure with difficulty in intubation and extubation, risk of flap loss due to tongue movement, and the presence of thick and aesthetically unpleasant tissue.

In the last two decades, the buccinator muscle flap has been widely used for the repair of cleft and

palate fistulae, mainly for defects in the middle third and posterior palate.

Rintala[6] used a mucosal lip flap for the treatment of anterior palate fistulae; however, it was a random flap, which limited its length. The same flap was described by several other authors[4,12-14]. Another random flap from the gingivobuccal sulcus was used by Hirshowitz & Mahler[15] for defects of the alveolar process, in which the canine and the first molar were absent. Sarabahi & Tiwari, in 2006[7,] published an article describing a flap modification that included the underlying muscles, making it more robust and with better vascularization, based on the terminal branches of the superior labial artery.

The myomucosal upper lip flap is indicated for the treatment of anterior hard palate fistulae and buccoalveolar fistulae with or without bone graft[14]. The surgical approach reported is performed in a single stage, without the need to section the pedicle that incorporates the alveolar arch, in addition to not impeding the future use of dental prostheses. It can be used even in patients with complete dentition, in which a plastic stent is used to protect the pedicle from being bitten. Note that, in this case, a two-stage surgical procedure is necessary.

For this reason and for presenting an appropriate rotation arc and vascularization by the superior labial artery, this myomucosal flap is an excellent option for the treatment of anterior palatal fistulae.

CONCLUSION

Because of the various forms and presentations of palatal fistulae, we can conclude that having a diverse arsenal of techniques for their correction is of utmost importance. The technique discussed in this report is a simple and efficient method for the correction of an anterior palatal fistula.

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