

Caner Sahin*

Sakarya Akyazi State Hospital, ENT Clinic, Sakarya, Turkey

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*Corresponding author: Caner Sahin, MD, Sakarya Akyazi State Hospital, ENT Clinic, Sakarya, Turkey, Fax: +90-264-4187835; E-mail: drcaner2001@gmail.com

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Case Report

Treatment of Ankyloglossia with Coblation Assisted Surgery

Abstract

Ankyloglossia is a disease characterized by difficulty in breast-feeding, limitation of tongue, and speech disorders. Prevalence of the disease is %1-10 in the literature (1). Cold knife, Laser surgery, electro cautery methods are used in the surgical treatment of the disease. Coblation radiofrequency technology provides low temperature work with minimal damage to neighborhood tissues. We present a 21 years old male with ankyloglossia treated by coblation surgery in the lights of the literature.

Introduction

Ankyloglossia named also as hypertrophic lingual frenulum, tongue-tie in the literature. There is a fibrous band between base of tongue and tongue that prevents the movement of the tongue. Males are more often affected than females [1]. Breast feeding, speech problems and nutritional problems are associated with the disease because of functional problem of tongue.

Treatment of the disease is surgical treatment. Time of the surgery is controversial. Cold surgery, electro surgery, laser surgical methods are described in the literature [2-4].

Coblation surgery is a new technology. Coblation surgery can be used in Tonsillectomy, adenoidectomy, soft palate surgery, inferior turbinate surgery in head and neck surgery.

We present a 21 years old male with ankyloglossia treated by coblation surgery in the lights of the literature.

Case Report

A 21 year old male is encountered to ENT clinics with speech disorder and tongue movement disorder. We found ankyloglossia with thick and short frenulum in our physical examination (Figure 1). The remaining head and neck examination was normal. There is no syndromic child and cleft palate in patient's history. The diagnosis is based on physical examination and symptoms of the patients.

Ankyloglossia was excised during coblation assisted dissection. We used Artrocure probe of coblation device designed for tonsillectomy surgery (Figure 2). Frenulectomy is performed in both tongue side and gingivobuccal side of the frenulum (Figure 3). The settings of coblator are 5 for coblation and 2 for coagulation. The ankyloglossia is dissected to the base of tongue using coblator probe. We left the remain tissue to secondary wound healing without the using suture techniques. The patient is controlled in the postoperatively 3.day, 7.day, 1. Month and 3. Month. There was no complication and restenosis after surgery. Patient satisfaction is good after surgery.

Discussion

Ankyloglossia is a congenital disorder. There have been reported many classification systems about the disease in the literature [5]. Thick and short lingual frenulum, limited function of tongue and

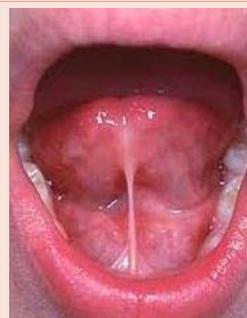


Figure 1: The preoperative aspect of hypertrophic lingual frenulum.



Figure 2: The artrocure probe used in surgery.



Figure 3: Postoperative 1 month appearance of the patient.

functional disorder of breast-feeding are considered of diagnosis criterias. There is no conclusion about the issue [6]. Prolonged Nipple pain is reported in mothers of ankyloglossia patients in literature [6]. This may lead to social problems as early cessation of breast-feeding.

Pathogenesis of the disease is not clear. Most commonly sporadic cases in otherwise healthy children. Disease can be associated with x-linked cleft palate, van der Woude syndrome and maternal cocaine abuse [7-9]. Connection between mutation of TBX22 gene and ankyloglossia is documented in literature [10].

Many surgical methods are described in the literature in the surgical treatment of ankyloglossia. Frenectomy, frenulectomy and frenuloplasty is described as surgical methods [12,13]. Frenectomy may be chosen in first 6 months of life. Frenuloplasty and frenulectomy can be chosen after 6 month of life time [11]. Cold surgical intervention has disadvantages of prolonged surgical time, bleeding in surgery, risk of damage to lingual nerve and Wharton duct.

Laser surgical intervention is well documented in literature. Different type of lasers are described in ankyloglossia surgery [14-16]. Intraoperative use of laser surgery provides bloodless field of surgery. These surgical method has disadvantages of delayed healing of tissues due to high thermal energy, usage of expensive equipment [16].

Coblation surgery is a technology. Coblation surgery can be used in Tonsillectomy, adenoidectomy, soft palate surgery, inferior turbinate surgery in head and neck surgery [17]. Plasma molecules effects the tissues at low temperatures (40-70 C). Hemostasis is ensured during surgery with minimal damage to neighborhood tissues. This advantage assures reduced risk formation of scar tissue. Teorically this situation may lead to decrease in restenosis. Coblation is cheaper than laser technology and can be applied in many centers with less equipment.

There are many few investigations about the use of coblation in ankyloglossia surgery in literature. We achieved good surgical results in midterm without complication in our study. Further prospective studies are needed about the issue to provide long term results.

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