

Parotid Duct Repair with Intubation Tube: Technical Note

Muhammed Beşir Öztürk, Seda Asrifoğlu Barutca, Elif Seda Keskin, Bekir Atik
Plastic Surgery, Istanbul Medeniyet Üniversitesi, İstanbul, Turkey

Abstract

The parotid duct can be damaged in traumatic injuries and surgical interventions. Early diagnosis and treatment of a duct injury is of great importance because complications such as sialocele and salivary gland fistula may develop if the duct is not surgically repaired. We think the cuff of an intubation tube is an ideal material in parotid duct repair, because of its technical characteristics, easiness of availability, and low-cost. In this paper, we described the use of the cuff cannula of an intubation tube for the diagnosis and treatment of parotid duct laceration, as a low-cost and easy to access material readily available in every operating room.

Keywords: Parotid duct repair, parotid duct silicone cannula, parotid duct stent repair

INTRODUCTION

The parotid duct can be damaged in traumatic injuries and surgical interventions. Early diagnosis and treatment of a duct injury is of great importance because complications such as sialocele and salivary gland fistula may develop if the duct is not surgically repaired.^[1] A guidance material is often needed to expose and repair the damaged duct. In the literature, a great variety of materials such as epidural catheter, urethral catheter, double-J catheter, catgut, and Vitallium wire have been used as an intraductal stent after repair.^[2-5] In this paper, we described the use of the cuff cannula of an intubation tube for the diagnosis and treatment of parotid duct laceration, as a low-cost and easy-to-access material readily available in every operating room.

CASE REPORT/TECHNIQUE

A 43-year-old male patient reported to the emergency clinic with the complaint of penetrating injury over the left side of his face. During his physical examination, a deep laceration was found in the left malar region [Figure 1a]. The facial nerve and parotid duct in this region were thought to possibly be injured. During the physical examination of the patient, the facial nerve was found to be intact. The patient was suspected of having a parotid duct laceration; therefore, first, the parotid papilla was found from a point at the level of the second molar tooth

in the mouth. Then, the duct was cannulated using the cuff cannula of an 8.5-mm ID intubation tube [Figure 2a and b]. The end of the silicone cannula was seen to be coming out of the laceration line, and the parotid duct was found to be injured. By operating the patient, the distal and proximal ends of the lacerated parotid duct were exposed, and the ends of the duct were renewed. The silicon tube entered into the parotid duct in the mouth was pushed forward and then was inserted into the distal and proximal ends of the lacerated parotid duct. Silicone tube was used as an intraductal stent [Figure 1b]. The parotid duct repair through the tube was carried out with polyamide 8.0 suture over the stent, in accordance with the surgical technique [Figure 1c]. The excess part of the tube was cut out, leaving the end of the silicon tube in the mouth. The tube was fixed to the buccal mucosa from 2 points, and the incisions in the skin were repaired.

RESULTS

During the follow-up of the patient, the saliva was observed to be flowing through the silicon tube, and no early or late postoperative complication was encountered. The swelling that developed

Address for correspondence: Dr. Elif Seda Keskin,
Istanbul Medeniyet Üniversitesi, İstanbul, Turkey.
E-mail: elifsedatamses@gmail.com

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Figure 1: (a) Preoperative appearance of the case, a deep laceration in the left malar region is seen. (b) Cannulation of the parotid duct with the silicon cuff cannula of the intubation tube. The arrow shows the silicon cannula used as a stent in the duct. (c) Completion of the intraoperative repair through the stent. The arrow shows the repair line. (d) The appearance of the patient on the 3rd week of his postoperative period, no complications were observed

in the malar region on the 4th postoperative day disappeared within 3–4 days. In the 3rd week, the tube was disconnected and taken out. The saliva was observed to be flowing through the papilla, without development of any symptoms of parotid duct obstruction [Figure 1d]. During his 1.5-year postoperative follow-up, our patient has been followed up without any problem.

DISCUSSION

Although parotid duct injuries are often penetrating injuries, they may also develop in consequence of tumor excisions and blunt traumas or as an iatrogenic complication.^[6]

The most common and difficult-to-treat complications observed in parotid duct injury are sialocele and parotid gland fistula.^[1] Many procedures intended for the prevention of complications have been described, such as follow-up with aspiration and compressive dressing, primary saturation of the duct, parasympathetic denervation, ligation of the duct, fistulization of the duct into the oral cavity, superficial or total parotidectomy, and radiotherapy.^[1,7-9]

Because of the availability of today's advanced surgical techniques and suture materials, as well as the good results of surgical repair, the duct is recommended to be repaired in all cases where possible.

Stent use is preferred and has been widely accepted in direct repair because it prevents the suture from passing through the rear wall during repair and also prevents the duct from being

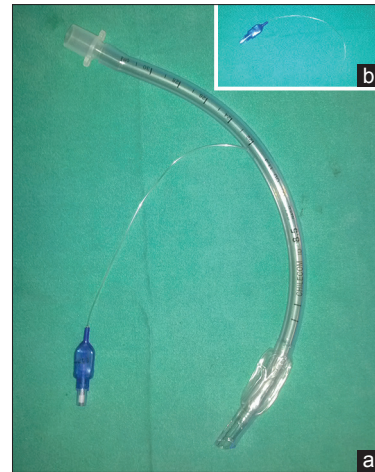


Figure 2: (a) 8.5-mm ID intubation tube, (b) cuff silicone of the intubation tube prepared to be used as a stent

collapsed and obstructed during recovery.^[3,10]

In the literature, a great variety of materials such as epidural catheter, urethral catheter, double-J catheter, catgut, and Vitallium wire have been used as an intraductal stent after repair.^[2-5]

The silicone cuff cannula that we used had ideal technical characteristics, with its elasticity as well as noncollapsible structure. The space in the tube allows for uninterrupted drainage of secretion from the salivary gland, during the postoperative period. In this way, it ensures the continuation of the salivary flow and also supports the repair line.

Silicone cuff cannula of the intubation tube that we described can easily be found in every operating room and is extremely cost-effective.

The cuff of an intubation tube is an ideal material in parotid duct repair because of its technical characteristics, easiness of availability, and low cost.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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