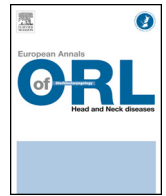




Available online at
ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com/en



Technical note

Cervical-transoral robotic oropharyngectomy and thin anterolateral thigh free flap

P. Gorphe^{a,*}, S. Temam^a, F. Kolb^b, Q. Qassemyar^b

^a Département de cancérologie cervico-faciale, Gustave-Roussy, 114, rue Edouard-Vaillant, 94800 Villejuif, France

^b Département de chirurgie plastique, Gustave-Roussy, 114, rue Edouard-Vaillant, 94800 Villejuif, France

ARTICLE INFO

Keywords:

Lateral oropharyngectomy
Transoral robotic surgery
Free flap
Thin perforator flap

ABSTRACT

The transoral robotic oropharyngectomy surgical technique was initially described for resection of small stage T1 or T2 lesions and the surgical defect is usually allowed to heal by secondary intention. We propose a refined surgical approach adapted to more complex situations such as salvage surgery and surgery in an irradiated field, based on previous experience in open approaches for oropharyngeal cancer. Via a combined cervical-transoral approach, we perform *en bloc* resection of the parapharyngeal space combined with transoral robotic lateral oropharyngectomy. Reconstruction of the surgical defect is performed with a thin anterolateral thigh free flap.

© 2017 Elsevier Masson SAS. All rights reserved.

1. Introduction

The classical transoral robotic lateral oropharyngectomy technique was described by Weinstein in 2006 [1]. This surgery was initially developed for resection of T1 and T2 lesions, for which the da Vinci robot was approved by the FDA in 2009. Most teams allow the surgical defect to heal by secondary intention, while a local flap is used to cover larger oropharyngeal defects: local musculomucosal advancement flap, pedicled facial artery musculomucosal (FAMM), or even a nasoseptal flap [2,3]. Based on our experience of robotic and non-robotic transmandibular, cervical-transoral and exclusively transoral oropharyngectomies, as well as fasciocutaneous free flap reconstruction and the specificities of perforator flaps, we propose a modified technique adapted to more complex situations, such as post-radiotherapy salvage surgery and surgery in irradiated fields.

2. Technique

2.1. Patient installation

The patient is installed in the supine position with the arms alongside the body and a pillow underneath the shoulders, which is removed after installation of the robot. Temporary tracheotomy is performed. Doppler ultrasound examination of the thigh is

performed on the operating table to plan and facilitate flap dissection by visualising the course and distribution of perforators, the types of perforators (septocutaneous, musculocutaneous), zones of aponeurotic passage and the superficial fascia. This examination also allows the skin paddle to be reliably centered on the perforators.

3. First stage: neck incision for lymph node dissection and parapharyngeal dissection

Lymph node dissection is performed according to the usual rules of cancer surgery. The hypoglossal nerve and superior laryngeal nerve are identified. The external carotid artery is dissected, together with all of its collateral branches. The emergence of the facial artery above the digastric muscle is identified. The posterior belly of the digastric muscle and the stylohyoid muscle are dissected in a posterior direction and are released. Posterior section of these muscles over the styloid process and mastoid apex and then anteriorly in contact with the hyoid bone just inferiorly and laterally to the point at which the hypoglossal nerve passes underneath the mylohyoid muscle ensures perfectly safe opening of the very virtual frontier between the parapharyngeal space and the cervical space (Fig. 1). Dissection of the anterior and lateral surface of the internal carotid artery can then be performed in the retrostyloid space almost as far as the foramen lacerum, with no major difficulties in the majority of cases. All of the parapharyngeal fat is retracted medially over the pharyngeal constrictors and the deep surface of the remaining styloid muscles, left *en bloc* with the fat at their endovascular portion, is released over the carotid

* Corresponding author.
E-mail address: Philippe.gorphe@gustaveroussy.fr (P. Gorphe).

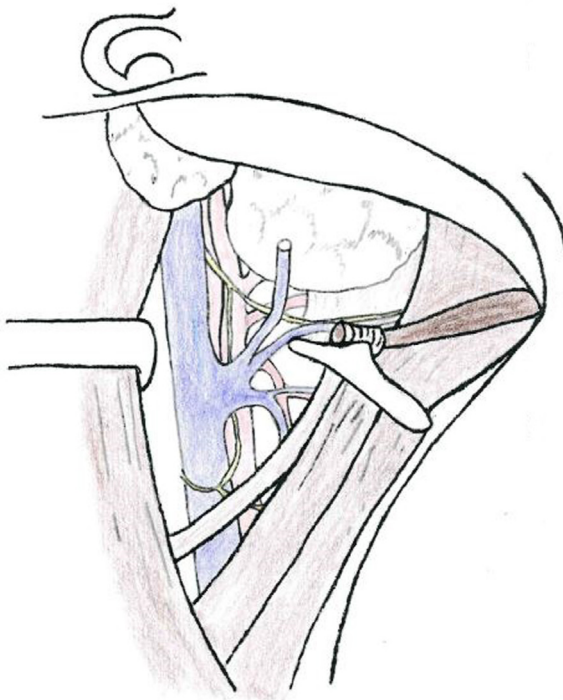


Fig. 1. Neck exposure after lymph node dissection. Resection of the posterior belly of the digastric muscle and the stylohyoid muscle provides access to the prestyloid parapharyngeal space and releases the facial artery, which is retracted inferiorly and anteriorly away from the surgical field during the transoral stage.

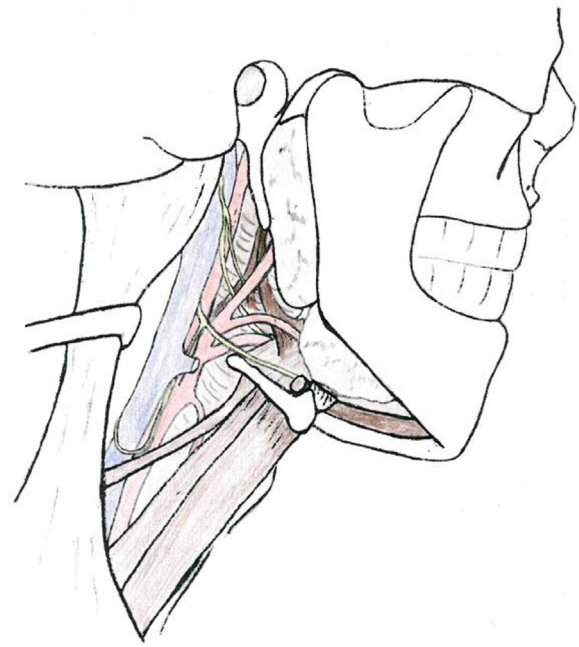


Fig. 2. Exposure of prestyloid and retrostyloid parapharyngeal spaces. During the cervical stage, the prestyloid fat is totally released and reclined medially over the pharyngeal constrictors. The medial and lateral surfaces of the internal carotid artery in the retrostyloid space are released via the cervical approach, releasing the deep surface of the styloglossal and stylopharyngeal muscles, which are subsequently sectioned laterally during the transoral robotic stage, allowing complete *en bloc* retraction of the styloid muscles and prestyloid and retrostyloid parapharyngeal spaces over the oropharyngectomy surgical specimen.

artery, ensuring maximal deep tumour resection margins (Fig. 2). Styloglossal and stylopharyngeal muscles can be released from the styloid process at this stage, but preservation of these muscles facilitates vascular identification during the transoral stage, when they can be safely released. Once this dissection has been completed, a betadine compress is placed in the neck incision and the operative field is covered with a sterile drape.

3.1. Second stage: dissection of the anterolateral thigh flap

In this indication, the anterolateral thigh flap is raised in a very superficial plane, that of the superficial fascia (Fig. 3, see published articles on superficial fascia anterolateral thigh flap) [4,5].

3.2. Third stage: transoral robotic stage

This stage of the operation resembles the original technique described by Weinstein et al., which was itself derived from the transoral lateral oropharyngectomy technique described by Lacourreye et al. and Holsinger et al. [1,6,7]. Transoral exposure is ensured by means of a Boyle-Davis retractor or a specific suspended Faye-Kastenbauer retractor. The da Vinci Xi robot is installed in the transoral configuration, with a preference for the 0° scope over the 30° scope for the lateral and posterior oropharynx, with the coagulating spatula or monopolar scissors on the arm ipsilateral to the lesion, and the Maryland bipolar forceps on the contralateral arm. The assistant surgeon is seated at the patient's head.

The mucosa of the anterior pillar of fauces is incised at the level of the superior part of the pterygomandibular raphe, exposing the pharyngeal constrictors. The mucosal incision is continued inferiorly and the constrictors are sectioned vertically, exposing the prestyloid parapharyngeal space. Incision of the constrictors from above downwards at this stage provides wide access to the parapharyngeal space, the deep part of which was already released during the cervical stage. The deep pole of the parotid gland is then

constantly observed laterally and the medial pterygoid muscle is easily identified. The section is continued superiorly onto the ipsilateral soft palate and then descends over the posterior wall with resection of the posterior pillar, contiguously opening the raphe and exposing the retropharyngeal space. Medial retraction of the specimen places tension on the deep styloglossal and stylopharyngeal muscles, the last remaining styloid muscles lying side by side. As the deep surface of these muscles was already dissected during the cervical stage, lateral section allows complete medial retraction of all of the styloid muscles onto the dissection specimen, exposing the retrostyloid neurovascular bundle in the surgical field. Section of the stylohyoid muscle at the cervical stage allows release of the facial artery, which is retracted medially and inferiorly outside of the surgical field. A branch of the pharyngeal plexus of the vagus nerve is constantly observed medially at mid-height, which then descends vertically before penetrating horizontally in a fan-shaped fashion, as a result of tension, into the posterior surface of the pharyngeal constrictor, which must be sectioned without electrocoagulation. At this stage, the extent of the resection depends on involvement of the tongue base. Section is continued inferiorly onto the lingual junction zone and posterior oral floor, usually exposing the distal lingual artery. The amygdaloglossal sulcus is resected with or without a portion of the tongue base, depending on tumour extension and the planned resection. Section of the posterior wall is continued as far as the junctional region of the oropharynx, resecting the lateral pharyngoepiglottic fold, which marks the lower limit of the oropharynx. The resection then passes in contact with the free edge of the epiglottis and ascends over the tongue base to reach the anterior incision, completing resection of the surgical specimen, which is oriented on a corkboard according to the operative diagram. If necessary, frozen sections are performed and sent for histological examination to confirm the negative surgical margins. The size and shape of the defect that needs to be reconstructed

Download English Version:

<https://daneshyari.com/en/article/8805966>

Download Persian Version:

<https://daneshyari.com/article/8805966>

[Daneshyari.com](https://daneshyari.com)