

## Extended Abstract

## Challenges in initiation and running an ENT, head &amp; neck robotic surgery program in our country

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To pledge and run the robotic program successfully has been a very challenging task for us. This program at our hospital which is one of the largest corporate hospitals in India started two and half years ago. We have done 110 cases so far. In developing countries like India starting such a program involved high costs of training as there is no ENT, Head and Neck training program here and non-availability of trained surgeons is added disadvantage. Running the program successfully has also been met with challenges. There are various reasons or drawbacks here as to not having very large numbers in our series despite having excellent feedback from almost every patient that underwent robotic surgery at our setup.

Recent advancements in robotics technology have allowed more complex surgical procedures to be performed using minimally invasive approaches. In this article, we reviewed the role of robotic assistance in Otolaryngology and Head and Neck Surgery. We highlight the advantages of robot-assisted surgery and its clinical application in this field.

The anatomical complexity of the oropharynx and the difficulty in reaching its distal portion has always conditioned the surgical accessibility.

Robotic surgery represents an excellent alternative in the treatment of cervico-facial oncological diseases.

This series comprises all patients managed for head and neck cancer by Trans Oral Robotic Surgery TORS. The staging assessment, including neck ultrasound and total body PET/CT scan, was performed in each patient according to the TNM classification.

All charts were recorded with the following data: name and surname, age, gender, date of surgery intra or post-operative hemorrhagia, tumor site, histology, TNM stage, robot set-up time, tumor resection time, whether or not tracheotomy was performed, whether or not neck dissection was performed, Insertion of a nasogastric tube or gastrostomy, time to resumption of oral feeding, surgical margins, mean length of hospital stay, adjuvant treatment and follow-up.

From February 2013 to February 2018, TORS was performed in 67 consecutive patients affected by head and neck tumours.

We divided, our sample, in 3 subsites: supraglottic larynx, parapharyngeal space and oropharynx.

Pathology reports confirmed malignancy in 44 cases: 8 cases lymphomas, 36 cases of Squamous cell carcinoma (SCC), 5 cases of benign salivary glands tumors and 18 miscellaneous cases. Neck dissection was performed in 12 cases.

Tracheotomy was performed in 3/67 cases for respiratory failures. A nasogastric tube was inserted at the end of the surgical procedure in 21 patients. The mean length of hospital stay was 10 days.

Major complications included post-operative bleeding in 3 patients, 1 exitus for massive bleeding 20 days post-surgery and 1 respiratory failure treated with tracheotomy and monitoring in the Intensive Care Unit (ICU) for 3 days.

Robotic surgery has been considered a valid alternative to traditional open treatment in many specializations with the advantages of an endoscopic procedure, with the same oncological and functional results and with fewer complications. The advantages of this type of surgical technique have been discussed, it is mandatory to focus on the indications and this series comprises all patients managed for head and neck cancer by TORS between February 2013 and February 2018 by the Maxillofacial and ENT surgery department of Istituto Nazionale Tumori IRCCS Pascale, Naples, Italy.

The staging assessment, including neck ultrasound and total body PET/CT scan, was performed in each patient according to the TNM classification (8ed).

Each case was discussed at a multidisciplinary consultation meeting during which it was decided to perform TORS.

Unilateral or bilateral neck dissection of group I to V nodes, according to tumour site, was performed during the same operating time, when indicated.

Patients underwent general anesthesia via nasotracheal intubation. Transoral exposure was obtained with a Feyh-Kastenbauer (FK) retractor and three arms were used: a central endoscopic arm with a 0° integrated three-dimensional camera; a right robotic arm with a 5-mm monopolar cautery with a spatula tip; and a left robotic arm with a 5-mm DeBakey forceps. The surgeon was seated at the console and the assistant was seated at the patient's head to monitor the operative site, retract tissues, and facilitate dissection, to evacuate smoke released by the monopolar electrocautery, and to perform suction in the case of intraoperative bleeding.

Adjuvant therapy was discussed at the multidisciplinary consultation meetings, based on the pTNM classification.

All charts were recorded with the following data: name and surname, age, gender, date of surgery, intra or post-operative hemorrhagia, tumor site, histology, pTNM stage, robot set-up time, tumor resection time, whether or not tracheotomy was performed, whether or not neck dissection was performed, insertion of a nasogastric tube or gastrostomy, time to resumption of oral feeding, surgical margins, mean length of hospital stay, adjuvant treatment and follow-up.