PHARYNGEAL AND LARYNGEAL CANCER ENDOSCOPIC SURGERY TRANSORAL ROBOTIC SURGERY (TORS) FOR EARLY CANCERS

M Remacle, V Bachy, G Lawson, S Van Der Vorst
Department of ORL-Head & Neck surgery
CHU Mont-Godinne
University of Louvain Belgium

Jacob Epstein torso in metal from the Rock Drill 1913-1915

Disclosure

- Flight ticket for the meeting offered by Lumenis, Santa Clara, CA

Cassandra Simonetti Precious cargo 2010

Early cancers: Partial surgery works

Surgery alone by transoral approach or open partial pharyngolaryngectomy gives satisfactory results in terms of survival and locoregional control.

In case of recurrence, this makes it possible to operate on patients in nonirradiated areas with lower morbidity and mortality and better results

- Foucher et al

Early cancers: Partial surgery works

- Initial partial surgery is indicated for early diseases. This surgery may be performed endoscopically or openly. The results are excellent in terms of local control and function. Transoral robotic surgery is under evaluation

Preconditions for this method are the transoral approach and the possibility of intraoperative evaluation of the true extent of tumor by using the surgical microscope.


Materiel

Risk of bleeding: superior laryngeal artery
Vascular clipping can be useful
Transmuscular cordectomy

After previous superficial cordectomy

robot Da Vinci

robot Da Vinci
Carcinoma
Piriform sinus
T2NoMo
Total laryngectomy

- Possible
- Useful mainly for salvage surgery after chemoradiotherapy
  - Less dissection
  - No dissection of the superficial planes
  - Less risk of fistula
- New “waveguide fiber” system
- 40 watt CO₂ laser system
- Aiming beam for ease of targeting tissue

**FiberLase Waveguide Features**
- Maximum input power 40 Watts
- 2 meters length
- Renewable fiber tip

**Preoperative control T2 right lateral pharyngeal wall and tonsil extended to the piriform sinus**
TORS – Co2 laser WV T2 right lateral pharyngeal wall and tonsil extended to the piriform sinus

Electrocautery versus Laser

Robot da Vinci and Acupulse Co2 laser fiber

Robot Da Vinci and Acupulse Co2 laser fiber

T2 TUMOR OF THE LATERAL BASE OF TONGUE
Breakdown of patients

<table>
<thead>
<tr>
<th>Tumor site</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supraglottic tumors</td>
<td>10</td>
</tr>
<tr>
<td>Epiglottis</td>
<td>6</td>
</tr>
<tr>
<td>Ventricular fold</td>
<td>2</td>
</tr>
<tr>
<td>Aryepiglottic fold</td>
<td>2</td>
</tr>
<tr>
<td>Pharyngeal tumors</td>
<td>10</td>
</tr>
<tr>
<td>Tonsils</td>
<td>5</td>
</tr>
<tr>
<td>Base of tongue</td>
<td>1</td>
</tr>
<tr>
<td>Pyriform sinus</td>
<td>2</td>
</tr>
<tr>
<td>Posterior pharyngeal wall</td>
<td>2</td>
</tr>
<tr>
<td>Oral Cavity</td>
<td>Tongue</td>
</tr>
</tbody>
</table>

Breakdown of patients

<table>
<thead>
<tr>
<th>Number of patients</th>
<th>91</th>
</tr>
</thead>
<tbody>
<tr>
<td>TORS</td>
<td>92</td>
</tr>
<tr>
<td>Cancer</td>
<td>61</td>
</tr>
<tr>
<td>Pyriform sinus</td>
<td>5  (4 patients)</td>
</tr>
</tbody>
</table>
| 1 local recurrence | 5  2
| 2nd TORS           | 5  |
| Lateral wall, 3     | 5  |
| Minor OSAS         | 25 |
| Parapharyngeal      | 3  |
| Tumors             | 2  |
| Base of tongue      | 2  |
| Benign lesions      | 2  |

Tumor T stage (pathological staging)
robot Da Vinci

- Learning curve
  - Extended time for the setting 45 min (30-75)
  - Scopes et mouths-gag to be improved
  - More carbonization
  - Expensive
  - 2 trained surgeons necessary