CO2 LASER IN MANAGEMENT OF PRECANCEROUS AND EARLY GLOTTIC CANCER

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HEAD AND NECK DIVISION
Which is the treatment of choice?
Although RT is still considered the treatment of choice for early glottic cancer, laser surgery has been shown to provide an alternative in terms of cure rate and functional result, because.....
In last few years the progress of Laser technology, particularly perfecting of micromanipulator, has given to endoscopic laser surgery extreme precision and few adverse effects (no carbonization, no termic damage, good evaluation of specimen)
Problems of diagnosis

Random biopsies are frequently not representative of the entire lesion or inadequate.

Whole thickness biopsies too often cause a permanent damage to vocal cord ultrastructure.
Which is the treatment of choice?

EXCISIONAL BIOPSY (EB)
(Introduced by Strong and Jako in 1972)

Excisional biopsy allows the removal of the lesion in healthy tissue.

DIAGNOSIS and TREATMENT
EPITHELIUM: 0.02 MM

REINKE’S SPACE: 0.3 MM

VOCAL LIGAMENT: 0.8 MM

VOCAL MUSCLE

(Hirano M. Folia Phoniatri. 1974)
CLASSIFICATION of CORDECTOMY  
(According to E.L.S)

TYPE I : SUBEPITHELIAL CORDECTOMY  
TYPE II : SUBLIGAMENTOUS CORDECTOMY  
TYPE III : TRANSMUSCULAR CORDECTOMY  
TYPE IV : TOTAL SUB PERICHONDRIAL CORDECTOMY  
TYPE V : EXTENDED TOTAL CORDECTOMY

European Laryngological Society Classification Committee (2000)
Carcinoma in situ

type I cordectomy

CO2 LASER IN MANAGEMENT OF PRECANCEROUS AND EARLY GLOTTIC CANCER
Microinvasive SCC pT1a

type II cordectomy
SCC yT1a

After radiotherapy failure

type III cordectomy (transmucosal)

CO2 LASER IN MANAGEMENT OF PRECANCEROUS AND EARLY GLOTTIC CANCER
SCC T1b

type V cordectomy (extended total cordectomy)
After 9 months
Glottis insufficiency after extended total cordectomy
PRELIMINARY RESULTS

45 patients From January 1999 to September 2000

PREOPERATIVE DIAGNOSIS

20 patients (44.5 %) had histological diagnosis of the SCC
25 patients (55.5 %) only clinical suspicion of neoplastic lesion

POSTOPERATIVE DIAGNOSIS

\( cT1 \) (20 patients)
- pT1 15 patients
- pT0 5 patients

\( S\ L \) (25 patients)
- pT1 17 patients; pTis 5 patients
- 1 LIN II, 2 LIN I
CONSEQUENT WORK-UP

Follow up: 12-32 months
Median 15 m

27 T1a
5 T1b
5 Tis

LIN I-II
3 patients

5 pT0

7 Positive margins

3 RT

4 EB

45 NED and 43 patients (93.3%) alone EB.
RADIOTHERAPY LOCAL CONTROL IN GLOTTIC CANCER T1

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<th>author</th>
<th>cases</th>
<th>local control</th>
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<tr>
<td>FLETCHER</td>
<td>507</td>
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<tr>
<td>MENDENHAL</td>
<td>279</td>
<td>92%</td>
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<tr>
<td>ESCHWEGE</td>
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<tr>
<td>HARWOOD</td>
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LASER SURGERY LOCAL CONTROL IN GLOTTIC CANCER T1

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<tr>
<td>FRECHE</td>
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<td>90%</td>
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<tr>
<td>STEINER</td>
<td>96</td>
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<td>MOTTURA</td>
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<td>ANTONELLI</td>
<td>250</td>
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CONCLUSIONS

• Short recovery time (two nights)
• Contemporary diagnosis and adequate treatment
• Histological evaluation
• Functional results are comparable to RT in type I-III cordectomies
• No problems to further open surgery or RT for possible recurrence
CONCLUSIONS

Our attitude is endoscopic treatment with laser CO2 for precancerous lesions and early glottic cancer.

Controindications:

• General conditions
• No adequate exposure of larynx
• Multifocality
• Selected T1b
DEKUJI ZA POZORNOST