

성문상부암의 경구강 레이저 절제술

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Transoral Laser Surgery of Supraglottic Carcinoma

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서 론

가 1, 2

T1, T2
T3

1)

. 1947 Alonso가

성문상부암에 대한 경구강 CO₂
레이저 수술의 발전과정

2)

가 20

가

, 1939 Jackson
closed laryngoscope punch biopsy

forcep

가

가

CO₂1978 Vaughan³⁾

, 1950

60

(suspension laryngoscopy)

: , 602 - 702

34

. 1960 가

가

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, 1972 Jako Strong⁴⁾ CO₂

가 Steiner, Ambrosch, Ekel, Rudert⁹⁻¹³⁾

, 1974 Strong 1st centennial conference on laryngeal cancer

11 Goettingen Steiner⁹⁾

surgical principle(more and bigger is better)

. Steiner 1979

, 1978 Vaughan³⁾

Steiner 1993 240

1983 Davis 30

⁵⁾ CO₂ (20 pT2, 5 pT3, 5 pT4)

20 , 6 Rudert Werner¹²⁾ 30

, 6 가

4 , 3

, 1 T1

. 1991 Davis⁶⁾ 가 Desanto, 1980 Pearson¹⁴⁾

14 N3 1996 Goettingen

neck disease가

T1, T2 가 8

en bloc resection 33.5

. 1990 Zeitels⁷⁾ mini-

mally invasive surgery

CO₂

성문상부암 수술에 필요한 CO₂ 레이저의 기본 지식

. 1994 Zeitel, Davis,

Vaughan⁸⁾

CO₂ ,

45 (closed laryngoscope distensible laryngoscope oropharyngoscope), micromanipulator,

, 가 , 가 ,

가 ,

. CO₂ 10600 nm

가 , 가
 가 He - Ne
 guide beam . CO₂
 가 CO₂
 ,
 . CO₂ Nd : Yag
 ,
 . CO₂
 가 CO₂
 가
 . coagulation forcep suction bovie
 vascular clip
**레이저 성문상부 후두부분절제술에
 사용되는 후두경과 미세 수술 도구**
 후두경
 가
 가

가 가
 tubed laryngoscope(Fig. 1A)
 (en bloc) 가
 blade
 bivalved distending laryngopharyn-
 goscope adjustable supraglottiscope
 . distensible laryngoscope(Fig. 1B)
 . distending laryngo - pharyngoscope
 orientation,
 미세 수술 도구
 가
 . Grasping
 forcep(Fig. 2A)
 (suction tube)(Fig. 2B)
 monopolar electrocautery (suction bovie)
 grasping forcep
 . Coagulation forcep(Fig.
 2C)
 microlaryn-
 geal forcep
 monopolar
 coagulation

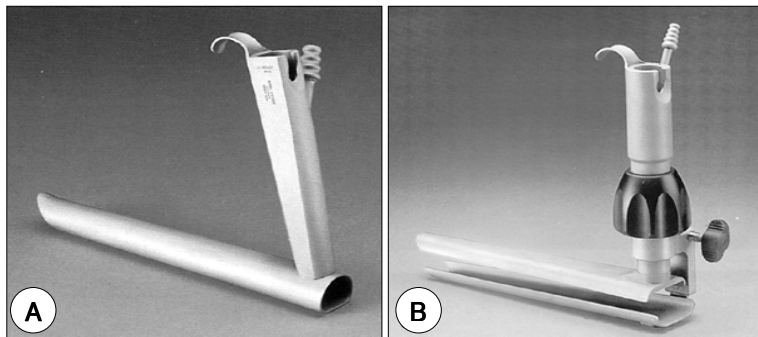


Fig. 1. Laryngoscope. A : Tubed (closed) laryngoscope, B : Distensible laryngoscope.

(, , 1 300~1000 가
) vascular clip (Fig. 2D). pulse mode , continuous
 wave 가
 가 2~8 W super pulse 30~60 W
 가 .
 CO₂ spot size가 micromanipulator
 가
 coagulation forcep 가
 vascular clip forcep, suction bovie
 . Protecting shield(Fig. 2E) 가 가 0.5
 mm
 shield가 suction tube , 가
 가 protecting shield . cutting instrument
 가 vaporization .
 ,
 swab .
 en bloc
 resection 가 .
 5~10 mm 가
 (Fig. 3).
 closed laryngoscope spreadable(distensible,
 adjustable) laryngoscope . spreadable
 laryngoscope lower blade ,
 가 가 en bloc resection
 . upper blade . (multiple
 2~3 W super- piece resection)
 pulse mode . superpulse (sagittal splitting of epiglottis) ,
 mode pulse mode 가 (Fig. 4A),

**성문상부암에 대한 경구강 레이저
 후두부분절제술의 수술 방법**

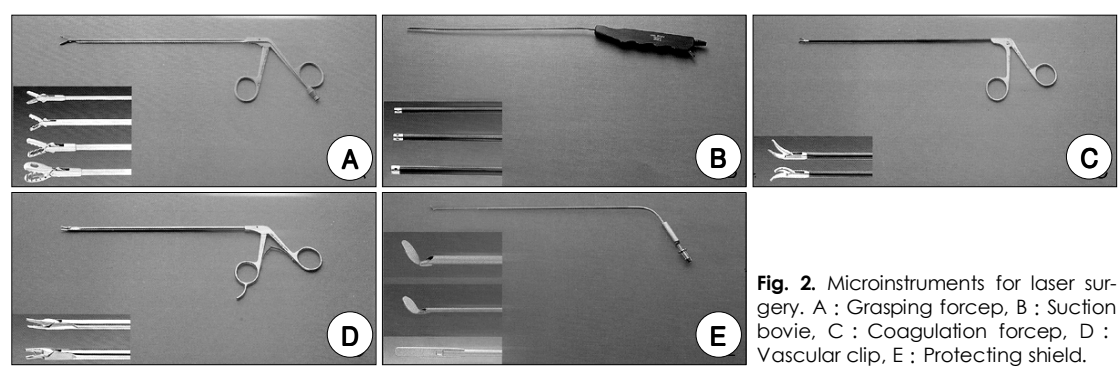


Fig. 2. Microinstruments for laser surgery. A : Grasping forcep, B : Suction bovie, C : Coagulation forcep, D : Vascular clip, E : Protecting shield.

가 . CO₂ 가
 (Fig. 4B).
 . coagulation forcep suction bovie
 vascular clip
 가 .
 가 coagulation forcep
 가

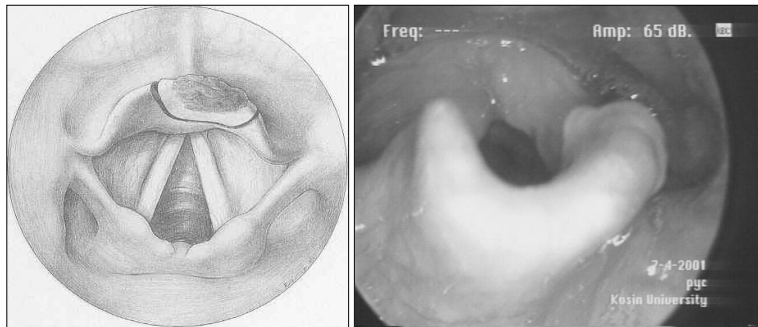


Fig. 3. En bloc resection for small suprahoid epiglottic cancer.

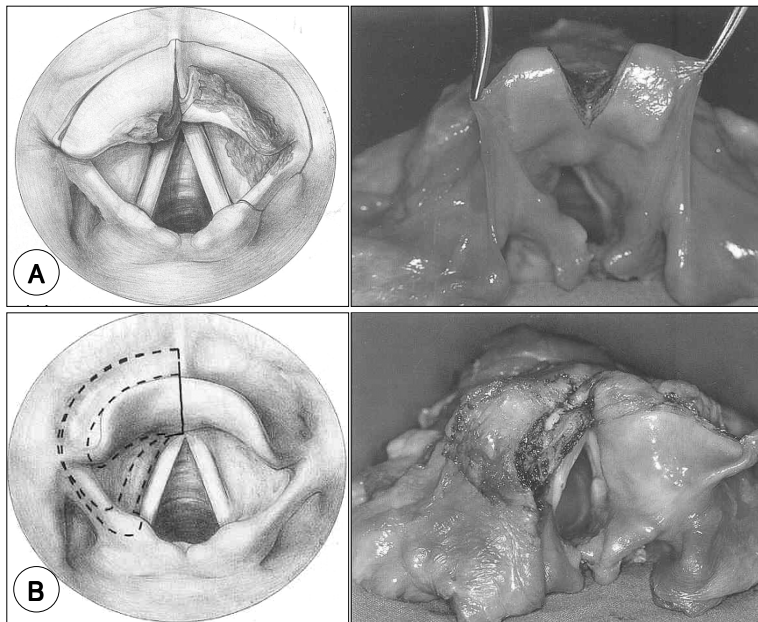


Fig. 4. Technique of multiple piece resection. A : Sagittal splitting of epiglottis in the midline and vallecular incision are shown. B : Unilateral suprahoid segments of the epiglottis is now removed. Contralateral side of suprahoid epiglottis will be removed by same technique. The resection proceeds caudally in a stepwise fashion.

레이저 성문상부 후두부분절제술의 장점

Halstead en bloc resection dilemma 가 . Steiner en bloc resection , en bloc resection 가 , 가 (safety margin) 1980 bloc wise resection multiple piece resection . Steiner 20 가 sealing , 가 , effect 가 가 9)15)

가 , 17)18) . 8)17) , , Rudert¹⁹⁾ 26 20

경구강 레이저 후두부분절제술의 합병증

가 2 8 가 3 , 4 , 20

가 3 , 4 , 20

Steiner ¹⁵⁾ 4~7% 가 Ambrosch, Rudert, 1 가 Kremer¹⁶⁾ 가 가 가 가

레이저 성문상부 후두부분절제술의 단점

() 가 가

레이저 수술시의 경부 청소술

99 12 2004 7
10 ,
4 ,
1
가 . Steiner 15
25.7 (3 ~58)
staged neck dissection 1

가 14.5 (2 ~43)
가 15 12 90
4~8 , 가 1 6.2 (2 ~28
4~6 .) 가 90 가
Desanto
Desanto 2
staged treatment plan

고신외대 이비인후과교실에서의 경험

15 5
3 (1 ~5)
11.8 (1 ~30)
staged neck dis- 11 7 2 7 ,
section 1 40

Table 1. Postoperative morbidity of laser supraglottic laryngectomy

Supraglottic cancer (n=15)	
Mean duration in days	
Decannulation	6.2 (n=12), except 1 case
Removal of N-G tube	11.8 (n=5)
Hospitalization	14.5
Complication	
Aspiration pneumonia	no
Post op. bleeding	no
Hypoglossal nerve palsy	1
Laryngeal stenosis	1

가 1
 30
 가 1
 2
 (Table 1).

결론

CO₂
 , , 가
 .
 가 ,

중심 단어 :

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