

후두협착 및 후두 육아종 수술시 Mitomycin-C 효과에 대한 예비적 보고

연세대학교 의과대학 이비인후과학교실, 음성언어의학연구소

최홍식 · 임재열 · 김한수 · 홍현준 · 유중범 · 김정홍 · 김광문

Preliminary Results of Mitomycin-C Application in the Treatment of Laryngeal Stenosis and Granuloma

Hong-Shik Choi, MD, Jae-Yol Lim, MD, Han Soo Kim, MD, Hyun Jun Hong, MD,
Jong Bum Yoo, MD, Jung Hong Kim, MD and Kwang-Moon Kim, MD

Department of Otorhinolaryngology, The Institute of Logopedics & Phoniatrics, Yonsei University College of Medicine,
Yong Dong Severance Hospital, Seoul, Korea

ABSTRACT

Background and Objectives : Mitomycin-C is an antibiotic, antineoplastic agent that inhibits DNA and protein synthesis, and fibroblast proliferation. It has been successfully used in adjunction to glaucoma surgery, dacryocystorhinostomy, pterygium surgery, and middle meatal antrostomy. The purpose of this study is to evaluate the efficacy and safety of intraoperative Mitomycin-C application as an adjunct therapy in the endoscopic treatment of laryngeal stenosis and granulation. **Materials and Method** : A total 13 subjects, of whom 2 had anterior glottic web, 4 posterior laryngeal stenosis, and 7 laryngeal granuloma were included. All underwent stroboscopy and were treated with endoscopic laryngomicrosurgery with CO₂ laser. Then, 1 cc of 0.4 mg/mL Mitomycin-C was directly applied for 4 minutes on the surgical site. The patients' symptoms were assessed, and the size of the airway was graded on a scale of I ($\leq 50\%$) to IV (total occlusion) after a mean follow-up period of 5 months. The recurrence of the laryngeal granuloma was checked. **Results** : There was a significant improvement in postoperative symptoms in the group of posterior laryngeal stenosis. Two with tracheotomy underwent decannulation. The postoperative size of airway was markedly increased and restenosis was not noted. There was only one case of recurrence in the granuloma group. **Conclusion** : According to these preliminary results, it is suggested that application of Mitomycin-C can be used as a beneficial adjunct therapy in the endoscopic CO₂ laser excision for laryngeal stenosis and granuloma. (Korean J Otolaryngol 2003;46:508-12)

KEY WORDS : Mitomycin-C · Laryngeal stenosis · Glottic web · Granuloma.

가 20~40%

1)

Mitomycin - C Streptomyces caespitosus
가
(fibroblast)

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: (02) 3497 - 3461 · : (02) 3463 - 4750
E - mail : hschoi@yumc.yonsei.ac.kr

2000 Rahbar ⁶⁾
Mitomycin - C

Grade (가 51% ~70%)가 2 ,
 Grade (가 71% ~99%)가 1 ,
 CO₂ laser , Mitomycin - C Grade () .
 2 (No. 1, 3)
 1 2 CO₂ laser
 가 가
 , 1 (No. 6) CO₂ laser
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Mitomycin - C CO₂ laser(Sharplan laser, Germany)
 laser 3 - 4 watt, 0.3 sec , superpulse
 mode
 13
 18 71 43 , 4 (No. 1~4), 0.4 mg/mL Mitomycin - C
 9 , 4 () 2 (No. 5, 6) , 1 cc cottonoid , 4
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 5 (Table 1 and 2).
 Cotton Myer⁷⁾가 Rigid
 , Grade (가 50% telelaryngoscope(Storz, Germany) LxStrobe 2(La-
 , 가 50%) 3 , ryngograph Ltd., United Kingdom)

Table 1. Profiles of the stenotic group

No	Sex	Age	Diagnosis	Etiology	Grade*	No. of operation	Duration of F/U
1	M	18	Laryngeal stenosis	Head trauma	II	1 (+1) [†]	7 mon
2	M	65	Laryngeal stenosis	Surgery	II	1	6.5 mon
3	M	38	Laryngeal stenosis	Head trauma	III	1 (+2)	5 mon
4	F	59	Laryngeal stenosis	Surgery	I	1	3.5 mon
5	F	20	Glottic web	Burn injury	I	1	7 mon
6	F	28	Glottic web	Surgery	I	1 (+1)	4 mon

*Grade : I ; 50% of stenotic lesions or web length, II ; 51 - 70%, III ; 71 - 99%, IV ; complete occlusion, † No. of previous operation

Table 2. Profiles of the granuloma group

No	Sex	Age	Diagnosis	No. of operation	Duration of F/U
7	M	70	Contact granuloma	1	7 mon
8	M	43	Contact granuloma	1	3.5 mon
9	M	38	Contact granuloma	1 (+2)*	3 mon
10	M	71	Contact granuloma	1 (+1)	3 mon
11	M	48	Contact granuloma	1	4 mon
12	M	48	Intubation granuloma	1	2.5 mon
13	F	33	Intubation granuloma	1	3 mon

*Number of previous operation

(Table 3).
 가 가 (good), 3 Grade 가
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 5 (Fig. 1).
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 가 (Fig. 2), 1 (No. 5)

Table 3. The preoperative and postoperative symptoms

No.	Preoperative symptoms	Postoperative symptoms
1	Dyspnea with corking	Asymptomatic after decanulation
2	Dyspnea on exertion	Asymptomatic
3	Dyspnea with corking	Asymptomatic after decanulation
4	Dyspnea on exertion	Asymptomatic

4

(Fig. 3).

7

1

6

1 (No. 11)

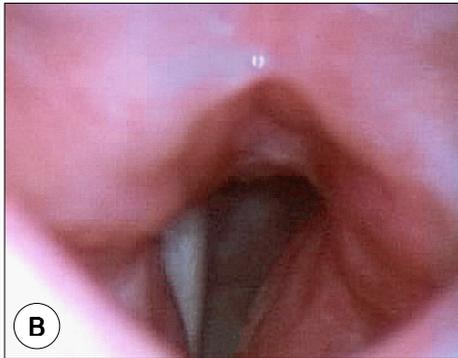
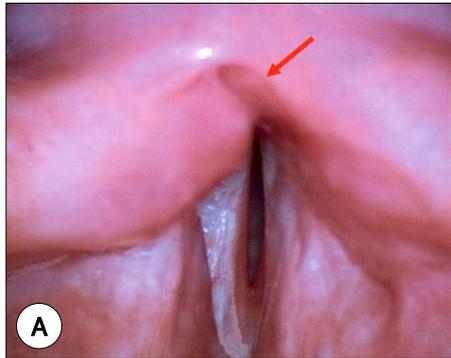


Fig. 1. Preoperative (A) and postoperative (B) stroboscopic findings of stenotic group (Patient No. 3) (POD #5 months).



Fig. 2. Preoperative (A) and postoperative (B) stroboscopic findings of stenotic group (Patient No. 5) (POD #7 months).

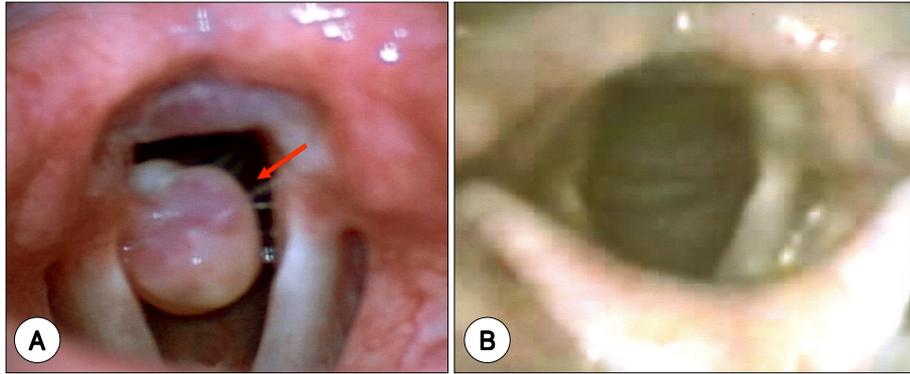


Fig. 3. Preoperative (A) and postoperative (B) stroboscopic and videolaryngoscopic findings of granuloma group (Patient No. 13) (POD #3 months).

Mitomycin - C 가

Mitomycin - C 가 가

0.1~0.4 mg/mL 가

CO₂ 1~5 Eliashar¹⁹⁾ Mito-

laser mycin - C 2 가

Montgomery T - 가 Mitomycin - C 2~4 가

8-11)

12-14) 가 1 cm 가 15)

0.4 mg/mL Mitomycin - C 4 Mitomycin -

Aminopro- 가

pionitrile(APA), 5 - Fluorouracil Triamcinolone Cotton Myer⁷⁾가

16)17) Mitomycin - C 가 가

3 가 가

Ward April¹⁸⁾ 가

5 laser 0.2 4

mg/mL Mitomycin 2 가 가

3 가 가

Mitomycin - C 가 가

Rahbar⁶⁾ 8 가

laser Mitomycin - C 0.4 mg/mL Mitomycin - C

1 (No. 3) CO₂ laser

Mitomycin - C T - 3

가 가

CO₂ laser

2
 keel stent
 CO₂ laser
 2
 54%
 CO₂ laser
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