

# 일차 진료에 필요한 기도처치 수기

## Techniques of Airway Management in General Practice

가

1198

Hyuk Jun Yang, M.D.

Department of Emergency Medicine

Gachon Medical School, Gil Medical Center

E - mail : yanghj@ghil.com

### Abstract

Airway management is one of the most critical interventions required to save a life. It is essential that primary physicians be as well prepared as possible with numerous techniques available for airway control. Optimal airway management requires an experienced caregiver, attention to details, and knowledge of the patient's physiology. A variety of pharmacological agents have proved useful in securing a patent airway and minimizing the risk to the patient. Depending on the skills of the caregiver, endotracheal intubation has become the preferred means of airway control in most patients. Advances in technique, equipment, and pharmacology have greatly improved the art of airway management; however, there is no substitute for an experienced clinician. This article reviews some of the useful techniques available. Perhaps the most important aspect of advanced airway management is the ability to recognize and be prepared for difficult airways. This article introduces a list of options for difficult airway situations.

**Keywords :** Airway management;  
Endotracheal intubation;  
Rapid sequence intubation;  
Noninvasive positive - pressure ventilation

: ; ; ;

가

가

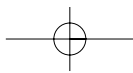
가

가

가

가

가



## Continuing Education Column



1.

가  
( 1)

가  
가

가

2L

5~6L

가 100% 가

24%

(Tracheal Suction)

가

가

가

가

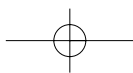
가

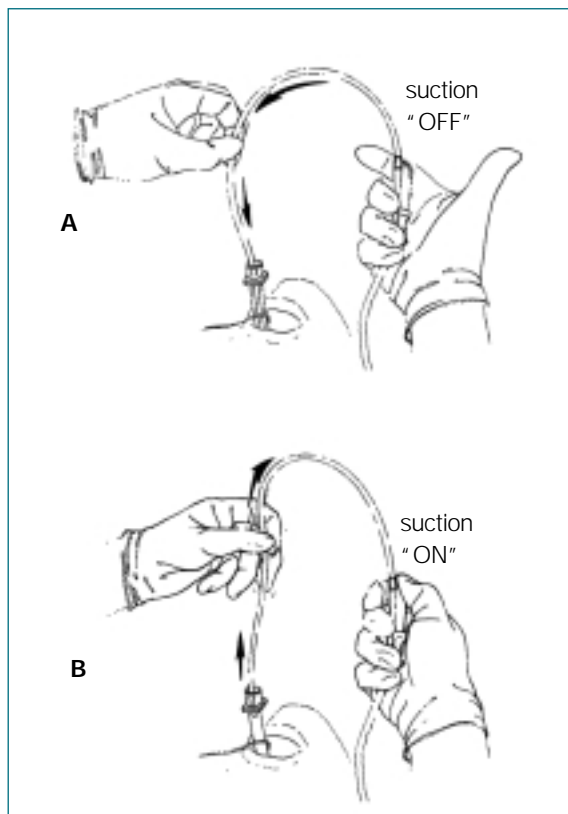
가

가

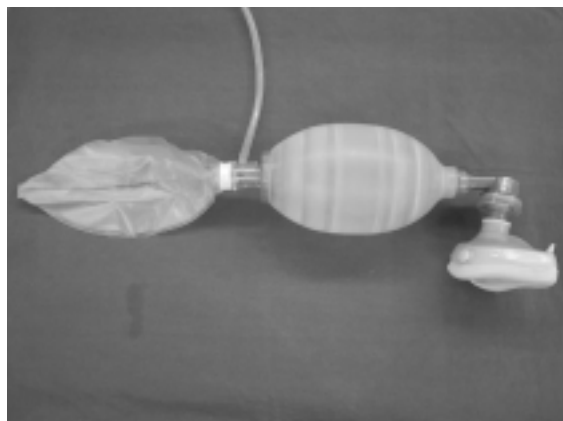
10~15

( 2).





2.



3.

가

가

가

1 가

가

가

100%

15L

2.5L

(Bag-Valve-Mask Unit)

( 3)

가 가

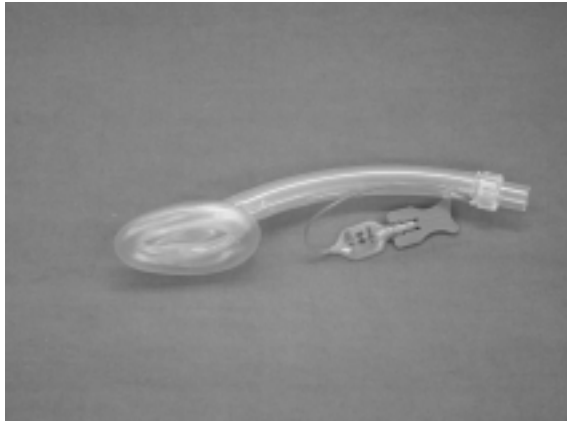
가

(Laryngeal Mask Airway, LMA)

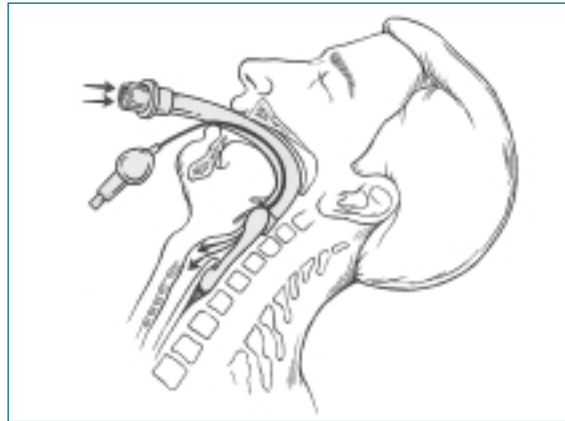
( 4, 5)

가

Continuing Education Column



4.



5.

가  
가 .

(3).

가

가

8.0~8.5mm,  
10ml

( 7.5~8.0mm), (stylet),

가

(1).

가

(2).

90

(Endotracheal Intubation)

가

가

1.

(Orotracheal Intubation)

가

가

2cm

가

23cm,

21cm가

40cmH<sub>2</sub>O

25cmH<sub>2</sub>O

## 2. (Nasotracheal Intubation)

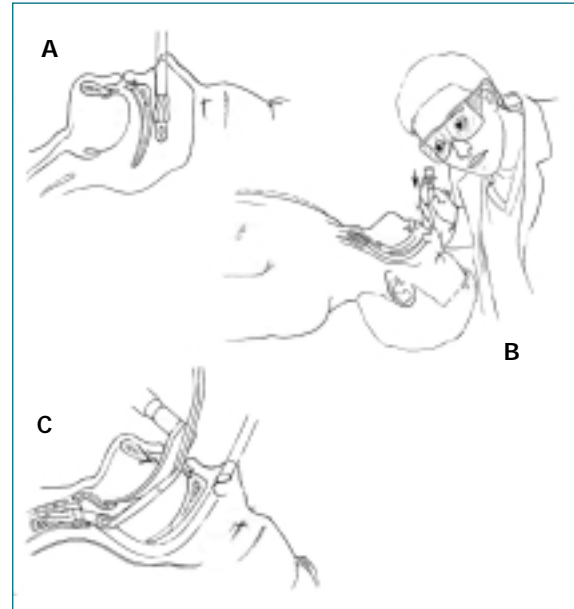
가

가

(4).

가

6.



28cm

0.5 ~ 1mm가

가

(2% )

(

가

6).

(5).

가

15 ~

30 °

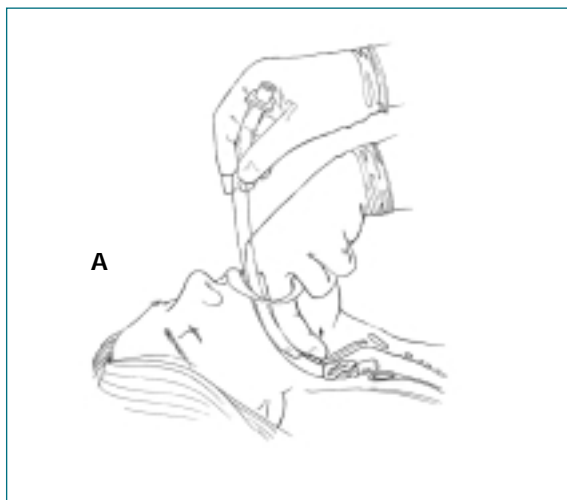
가

가

32cm,

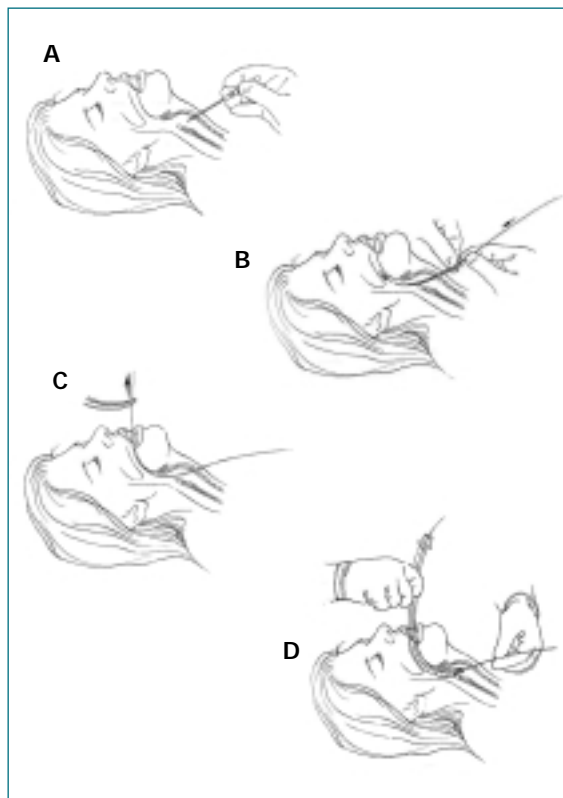
27 ~ 28cm

X - ray



7.

3. (Digital Intubation)  
( 7)



8.

가

4. (Retrograde Tracheal Intubation)  
( 8)

가

30~45.

70~75cm

가

## 5. (Rapid Sequence Intubation)

가

flumazenil

. Ketamine

. Keta-mine

가

(6, 7).

\* 1 : 가 propofol .

\* 2 : . Propofol etomidate

\* 3 : (Preoxygenation)

. Fentanyl 2

100%

2

95%

가 . Fentanyl

3~4

\* 4 :

\* 6 : Sellick Maneuver(Cricoid Pressure)

1mg/kg

30

가

가

0.02mg/kg

(8).

\* 5 :

\* 7 :

Thiopental(Pentotal)

barbiturate

. 3.0~5.0mg/kg

30~60

가

10~30

가

benzodiazepam midazolam, lorazepam,

가 acetyl-

diazepam

choline esterase

가

## Continuing Education Column

가 . pan-  
anticholinesterase curonium 1/3 1/3  
1/2 . Vecuronium 0.08 ~  
acetylcholine , 0.15mg/kg .  
anticholinesterase suc- 가 ,  
cynylcholine 가 가  
가 , 가  
가 ,  
가  
\* 8 :  
가 (Noninvasive Positive - Pressure Ventilation, NIPPV)  
가  
1980 가  
가 가  
succinylcholine .  
(30~60 )  
( 5~6 ) 가  
60 2~3  
가 1.0~1.5mg/kg 가  
Succinylcholine .  
Succinylcholine  
0.01mg/kg 1.  
(Continuous Positive Airway Pressure, CPAP)  
Pancuronium 가  
(9).  
가 . Vecuronium -





9.

( 9)

(11).

5cmH<sub>2</sub>O8.6cmH<sub>2</sub>O 가

가

가

10cmH<sub>2</sub>O,3cmH<sub>2</sub>O3cmH<sub>2</sub>O 가15cmH<sub>2</sub>O

가

가가

(12, 13). ㉠

5~10cmH<sub>2</sub>O 가15cmH<sub>2</sub>O

## 2.

## (Bilevel Positive Airway Pressure, BiPAP)

가

(PEEP) 가

가

가

(10).

1. Reinhart DJ, Simmons G. omparison of placement of laryngeal mask airway with endotracheal tube by paramedics and respiratory therapists. Ann Emerg Med 1994; 4: 260
2. Maltby JR, Loken RG, Watson NC. The laryngeal mask airway: Clinical appraisal in 250 patients. Can J Anesth 1990; 37: 509
3. Walls RM, Barton ED, McAfee AT. 2392 Emergency department intubations: first report of the ongoing National Emergency Airway Registry study(Near97). Ann Emerg Med 1999; 34: S14
4. Roppolo LP, Vilke GM, Chan TCI, Krishel S, Hayden SR, Rosen P, et al. Nasotracheal intubation in the emergency department, revisited. J Emerg Med 1999; 17: 791

*Continuing Education Column*

5. Rosen CL, Wolfe RE, Chew SE, Branney SW, Roe EJ. Blind nasotracheal intubation in the presence of facial trauma. J Emerg Med 1997; 15: 141
6. Vissers RJ, Barton ED, Sagarin MJ, Wolfe RE, Walls RM. Success and complication rates of rapid - sequence intubation in 1200 emergency intubations. Acad Emerg Med 1998; 5: 4
7. Dronen S. Rapid - sequence intubation: A safe but ill - defined procedure Acad Emerg Med 1999; 6: 31
8. Sivilotti ML, Ducharme J. Randomized, double - blind study on sedatives and hemodynamics during rapid sequence intubation in the emergency department The SHRED study. Ann Emerg Med 1998; 31: 313
9. Meduri GU, Abou - Shala N, Fox RC. Noninvasive face mask mechanical ventilation in patients with acute hypercapnic respiratory failure. Chest 1991; 10: 445
10. Brochard L, Isabey D, Piquet J, Amaro P. Reversal of acute exacerbations of chronic obstructive lung disease by inspiratory assistance with a facemask. N Engl J Med 1990; 323: 1523
11. Sacchetti AD, Harris RH, Paston C, Hernandez Z. Bi - level positive airway pressure support system use in acute congestive heart failure: Preliminary case series. Acad Emerg Med 1995; 2: 714
12. Kosowsky JM, Storrow AB, Carleton SC. Continuous and Bilevel positive airway pressure in the treatment of acute cardiogenic pulmonary edema [review]. Am J Emerg Med 2000; 18: 91
13. Mehta S, Jay GD, Woolard RH, Hipona RA, Connolly EM, Cimini DM, et al. Randomized, prospective trial of bilevel vs continuous positive airway pressure in acute pulmonary edema. Crit Care Med 1997; 25: 620