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[3] Zhao Xiufeng, Ming Tian. The effect of BlockBuster laryngeal mask equipped with ET Tube to patients under general anesthesia. The Journal of Practical Medicine 2016, 32(3):506-7.

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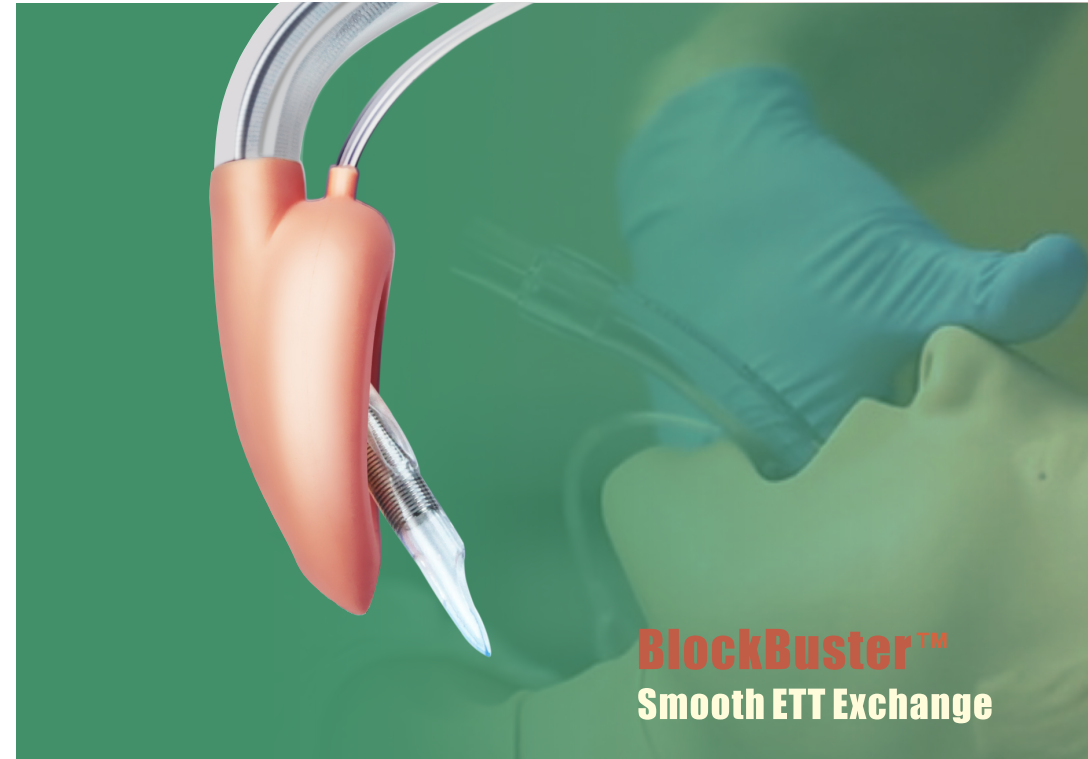


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# P Clinical problems

Compared with laryngeal mask airway, endotracheal tube has some disadvantages in some situations of anesthesia management.

## Operation

- More complex and take longer time
- The anesthesiologists need special training
- The patients need to be given muscle relaxant

## Airway Protection

- Contact with airway
- The intubation and extubation give rise to hemodynamic instability

## Complications

- Aspiration and backflow
- Post-intubation trachyphonia
- Sore throat
- Pharyngeal edema



## Difficult Airway

- Difficult Airway Management is closely related to the safety and quality of anesthesia. More than 50% of serious complications related to anesthesia result from improper anesthesia management.
- Anatomic abnormality and unanticipated difficulty with endotracheal intubation might result in the failure of intubation. [1]

**Traditional Laryngeal Mask Airway:** Functions insufficient, Intubation unsmooth, Low success rate for ETT exchange, Poor air tightness at low cuff pressure.



# The development of Laryngeal Mask Airway

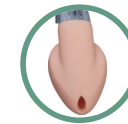
By DAS, if tracheal intubation fails, supraglottic airway devices are recommended to provide a route for oxygenation while reviewing how to proceed. [1]



**BlockBuster™ Laryngeal Mask Airway** invented by professor Ming Tian and produced by **Tuoren Medical** has some advantages in providing better supra-glottic ventilation and increasing green channel to intubation, reducing aspiration risk and post-intubation trachyphonia.



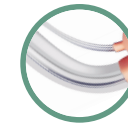
Four-way connector makes it easy to fix after placement.



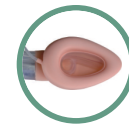
The design of inlet and outlet of gastric access channel is easy for gastric tube insertion.



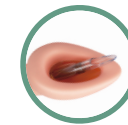
Integrated bite block prevents airway occlusion.



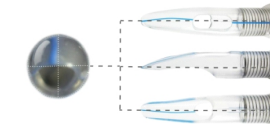
Airway tube: More than 95 degree angulated short airway tube provides easy insertion and matches oropharyngeal curve.



Sputum collection device can collect small quantity of sputum.



Guidance device allows the ET Tube to direct towards laryngeal opening at 30 degree angle, which enhances success rate of endotracheal intubation.



Intubating capability with Blockbuster ET Tube: Soft tip located at the center line and straight wire reinforced tube body facilitate the intubation and reduce lesion to mucosa.

## Offer Better SUPRAGLOTTIC AIRWAY MANAGEMENT



- **Gastric access:** Manage gastric content and reduce the risk of aspiration.
- **Simple Operation:** Time to intubation is short; the anesthesiologists don't need to adjust the patient's head and put the fingers into the patient's mouth;
- **Easy and Rapid Insertion:** More than 95 degree angulated short airway tube matches oropharyngeal curve;
- **High Hemodynamic stability;** [3]
- **Reduce the complications** during perioperative period. [4]
- **Optimal sealability:** The average seal pressure is more than 30 cmH<sub>2</sub>O. [4]
- **Flexibility and biocompatibility with silicone material;**
- **Blind intubation as well as intubation with fiberscope possible.**

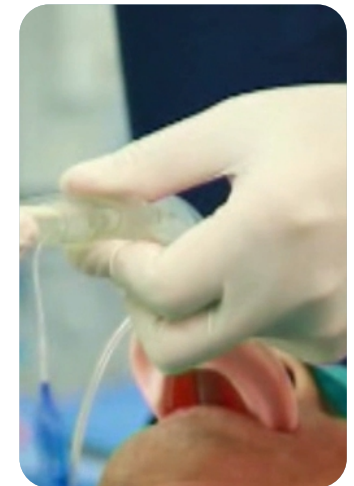
## Offer Subglottic Endotracheal Tube Channel in Case of Difficult Airway and Unexpected Difficult Airway

### Intubation Capability

- Equipped with Blockbuster endotracheal tube, the success rate for blind endotracheal intubation is more than 90% and the success rate for endotracheal intubation assisted by a flexible scope is almost 100%; [1]
- Ensure the oxygenation and prevent the hypoxemia in case of unexpected difficult airway;
- High Hemodynamic stability;

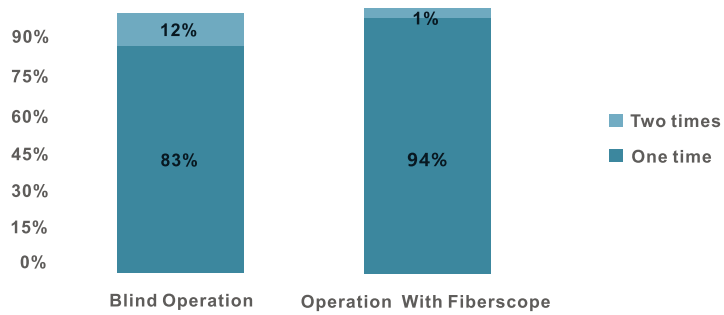
### Extubation Capability

- The solution to deal with difficult airway extubation suggested by ASA is to insert laryngeal mask airway before or after extubation. After extubation, the laryngeal mask airway can be used for ventilation or guiding endotracheal intubation. [5, 6]
- There will be higher hemodynamic stability and blood pressure stability;
- Inserting Blockbuster™ Laryngeal Mask Airway for ventilation before endotracheal extubation facilitates to maintain the stability of cardiovascular system and reduce extubation complications. [3]

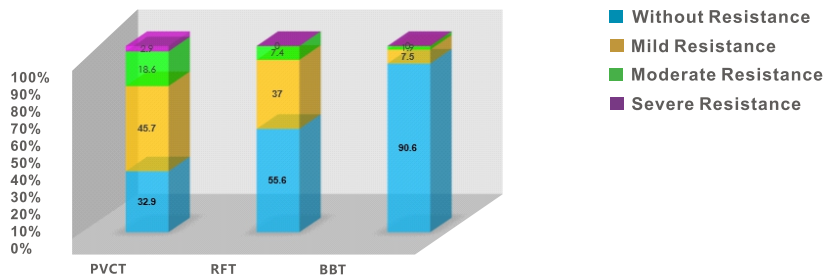




## The success rate for intubation is over 95%.

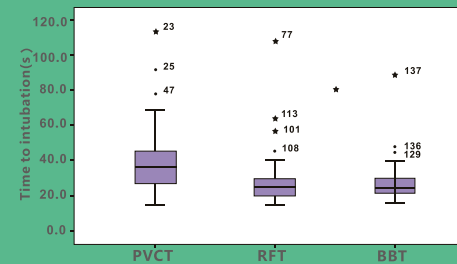


## BlockBuster™ Endotracheal Tube

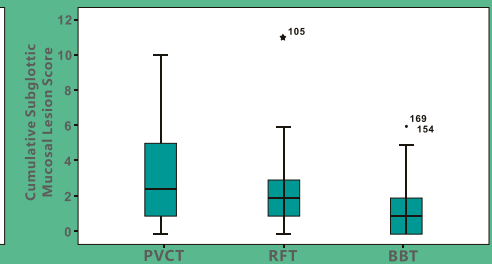


The tracheal intubation resistance of BBT is significantly less than PVCT ( $p < 0.001$ ) and RFT ( $p < 0.001$ ), while RFT is less than PVCT in the tracheal intubation resistance,  $P=0.012$ .

BlockBuster™ is associated with easier tube passage into the trachea, shorter intubation time and reduced subglottic mucosal injury. [7]

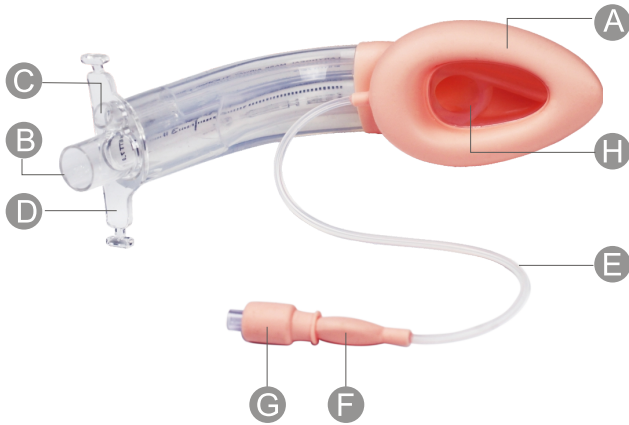


The time of intubation of PVCT is significantly longer than RFT ( $P < 0.001$ ) and BBT ( $P < 0.001$ ). No difference is observed between RFT and BBT ( $P=1$ ).



The CSMLS of BBT is also significantly lower than PVCT ( $P < 0.001$ ) and RFT ( $P=0.012$ ). It is similar between PVCT and RFT ( $P=0.105$ ).

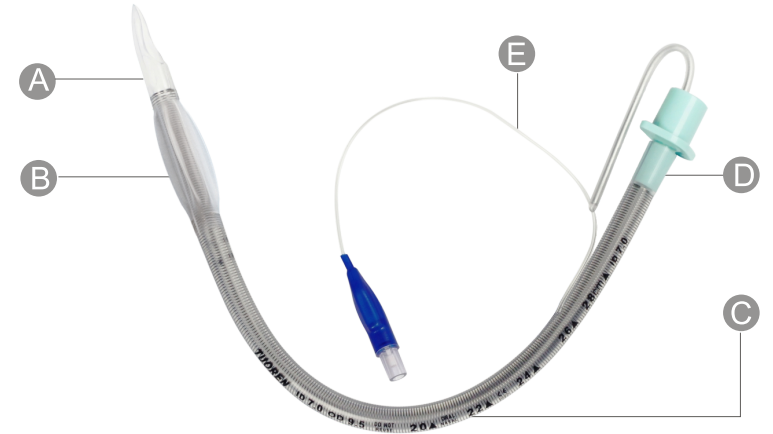
(PVCT: Polyvinyl Chloride Tube; RFT: Wire-reinforced Tube)



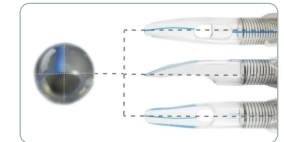
- A-Mask
- B-Airway Tube
- C-Gastric Access Channel
- D-Four-way Connector
- E-Inflation Line
- F-Inflation Pilot Balloon
- G-Check Valve
- H-ET Tube Guide Device

### Specification

Name	Type	Applicable Patient Weight	Blockbuster ETT (Max)	Bronchoscope	Gastric Tube (Suggested)
BlockBuster™ Laryngeal Mask	1#	<5kg	3.5	3.0mm	6Fr
	1.5#	5kg-10kg	4.0	3.0mm	8Fr
	2#	10kg-20kg	5.0	3.0mm	10Fr
	2.5#	20kg-30kg	5.5	3.0mm	12Fr
	3#	30kg-50kg	7.0	5.7mm	14Fr
	4#	50kg-70kg	7.5	5.7mm	14Fr
	5#	70kg-100kg	8.0	5.7mm	16Fr



- A-Soft tip
- B-Cuff
- C-Reinforced tube body
- D- Removable Connector
- E-Inflation device



### Specification

Name	Type
BlockBuster™ ET Tube	3.5#/4.0#/5.0#/5.5#/6.0#/6.5#/7.0#/7.5#/8.0#