

## Angiographic catheter as airway exchange device through laryngeal airway mask in unanticipated difficult airway in emergency department

Sir,

Angiographic catheter (AC) is commonly used in interventional cardiology, but its application outside cardiac catheterization laboratory (CCL) is seldom reported. AC has been used for nasogastric tube insertion.<sup>[1]</sup> We used AC as an airway exchange catheter through ProSeal laryngeal airway mask (PLMA) in an unanticipated difficult airway in emergency department (ED).

A 42-year-old man admitted at midnight to our ED with diagnosis of severe acute pancreatitis with respiratory failure with apparent normal airway. After preoxygenation rapid sequence intubation was tried with cricoid pressure but unable to intubate even after removal of cricoid pressure for a moment. Immediately airway was secured with size 4 PLMA. The patient needs definite airway for prolonged mechanical ventilation. But we did not have sophisticated airway gadgets in our resuscitation kit. Then we used a 9 Fr sterile AC (Medtronic, Minnesota, USA) with guide wire [Figure 1] lubricated with lignocaine 2% jelly as airway exchange catheter in airway port of PLMA [Figure 2] keeping suction catheter in gastric port. It passed smoothly into trachea and a tactile sensation was felt by keeping the palm on trachea. After 35 cm of insertion, PLMA was removed. Apnea oxygenation was supplied to the patient through the angiographic catheter after removing guide wire and an 8 mm internal diameter endotracheal tube (ET) was exchanged. ET confirmed with capnometry and 5-point chest auscultation.

Repeated attempts of laryngoscopy for tracheal intubation in difficult airway are associated with decreased success, increase complications, and morbidities. Alternative airway devices like gum elastic bougies, rigid or flexible fiberoptic bronchoscope, intubating laryngeal mask airway (LMA), video laryngoscope, light wand, and cricothyroidotomy are very effective in this situation.<sup>[2]</sup> Airway management



**Figure 1:** Angiographic catheter with guidewire



**Figure 2:** Angiography catheter inside ProSeal laryngeal airway mask

in ED is often more difficult than operation theater due to unavailability of difficult airway gadgets, improper environment, and untrained medical staff. As an intubation conduit LMA is used in different way like blind ET passage after proper LMA placement, using a pre-mounted ET in LMA, bougie-aided intubation via LMA, light wand-aided intubation through LMA, fiberoptic aided intubation via LMA, and so on. PLMA having narrower airway tube will not allow to pass larger ET, but absence of aperture bar allow smooth passage of AC. Above all, PLMAs have gastric drainage tube to reduced incidence of aspiration, prevent gastric insufflation, and allow ventilation with higher pressure as it was required in our patient. People used fiberoptic aided intubation through the LMA-Supreme using an Aintree Intubating Catheter (AIC) in manikin.<sup>[3]</sup> Cook *et al.*,<sup>[4]</sup> reported seven case of difficult intubation via PLMA using AIC. AIC are long length, atraumatic,

ability to oxygenate, and ventilate during exchange process. But the guidewire in it is too thin and soft for support. We used sterilized AC with atramatic guide wire which have same function as AIC but minimum cost and easily available from CCL. This AC was previously used for angiography but sterilized with 2% glutaraldehyde for 10 min before use in this patient.<sup>[5]</sup> In conclusion, emergency resuscitation and airway kit must contain classic LMA and LMA for rescue ventilation and oxygenation, while a re-sterilized AC can also be a useful gadget in difficult airway situation with limited resource.

**Sukhen Samanta, Sujay Samanta<sup>1</sup>,  
Arvind Kumar Baronia<sup>1</sup>, Abhishek Jha<sup>2</sup>**

Department of Anesthesia and Critical Care (Trauma Centre), Jai Prakash Narayan Apex Trauma Center, All India Institute of Medical Sciences, New Delhi, <sup>1</sup>Department of Critical Care Medicine, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, Uttar Pradesh, <sup>2</sup>Department of Anaesthesia and Intensive Care, Post Graduate Institute of Medical Education and Research, Chandigarh, India

**Correspondence:**

Dr. Sukhen Samanta,  
17 Dr A N Paul Lane, Bally, Howrah - 711 201,  
West Bengal, India. E-mail: dr.sukhensamanta@gmail.com

**References**

1. Ghatak T, Samanta S, Baronia AK. A new technique to insert nasogastric tube in an unconscious intubated patient. *N Am J Med Sci* 2013;5:68-70.
2. Combes X, Jabre P, Margenet A, Merle JC, Leroux B, Dru M, *et al.* Unanticipated difficult airway management in the prehospital emergency setting: Prospective validation of an algorithm. *Anesthesiology* 2011;114:105-10.
3. Joffe AM, Liew EC. Intubation through the LMA-Supreme: A pilot study of two techniques in a manikin. *Anaesth Intensive Care* 2010;38:33-8.
4. Cook TM, Soller C, Gupta K, Thornton M, O'Sullivan E. Non-conventional uses of the Aintree Intubating Catheter in management of the difficult airway. *Anaesthesia* 2007;62:169-74.
5. Rutala WA, Weber DJ. Healthcare infection control practices advisory committee (HICPAC). Guideline for disinfection and sterilization in healthcare facilities, 2008. Available from: [http://www.cdc.gov/hipac/pdf/guidelines/Disinfection\\_Nov\\_2008.pdf](http://www.cdc.gov/hipac/pdf/guidelines/Disinfection_Nov_2008.pdf) [Last accessed on 2010 Apr 20].

**Access this article online**

**Quick Response Code:**



**Website:**

[www.ijccm.org](http://www.ijccm.org)

**DOI:** 10.4103/0972-5229.126096