

|   |
|---|
| Access this article online  |
| Website: <a href="http://www.ijaweb.org">www.ijaweb.org</a>                       |
| DOI: 10.4103/ija.IJA_724_17   |
| Quick response code   |
|  |

## Jet insufflation options for the cannot intubate–cannot ventilate situation

Sir,

The recent letter by Kulkarni *et al.*<sup>[1]</sup> outlining the jet insufflation *jugaad* that was derived from a Jackson-Rees circuit, a 4 mm ID endotracheal tube connector, and Luer-lock venous extension tubing, offers a potentially viable alternative to commercially available jet ventilation devices such as the Enk Oxygen Flow Modulator (Cook Inc., Bloomington, IN, USA), the Rapid O<sub>2</sub><sup>™</sup> Insufflator (Meditech Systems Ltd, Shaftesbury, UK) and the Manujet III<sup>™</sup> (VBM, Medizintechnik GmbH, Sula and Neckar, Germany) for use in cannot intubate–cannot ventilate situations in paediatric patients. Indeed, the authors' improvised insufflator solution that offers both jet inspiration and active expiration exploits the Hagen–Poiseuille law in a very similar fashion to another relatively new commercially available device, the Ventrain<sup>®</sup> (Ventinova Medical B. V., Eindhoven, Netherlands).<sup>[2]</sup> This device has similarly been shown to allow both inspiration and active expiration when used with both short and long small-bore airway cannulae.<sup>[3]</sup> The Ventrain device is a portable, easy to use, light weight, stand-alone high-pressure injector that uses up to 15 L/min in oxygen flow. Importantly, it has also withstood the evaluative rigor of medical equipment regulatory agencies making it potentially safer than the improvised device suggested by Kulkarni *et al.* That said, I congratulate these authors on their improvisation and ingenuity, as they appear to have independently validated and partially replicated the work that had been accomplished with the Ventrain.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

**Hilary P Grocott**

Department of Anesthesia, University of Manitoba, Winnipeg, Manitoba, Canada

### Address for correspondence:

Dr. Hilary P Grocott,  
Department of Anesthesia, University of Manitoba, CR3008 - 369  
Tache Avenue, Winnipeg, R2H 2A6, Manitoba, Canada.  
E-mail: [hgrocott@sbgh.mb.ca](mailto:hgrocott@sbgh.mb.ca)

### REFERENCES

1. Kulkarni KS, Dave NM, Karnik PP, Garasia M. Jet insufflator for cannot intubate cannot ventilate situation. *An Indian Jugaad. Indian J Anaesth* 2017;61:941-2.
2. Lang SA. Emergency airway management: What are the roles for surgical cricothyroidotomy and the Ventrain(®) device? *Can J Anaesth* 2016;63:997-8.
3. de Wolf MW, Gottschall R, Preussler NP, Paxian M, Enk D. Emergency ventilation with the Ventrain<sup>®</sup> through an airway exchange catheter in a porcine model of complete upper airway obstruction. *Can J Anaesth* 2017;64:37-44.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

**How to cite this article:** Grocott HP. Jet insufflation options for the cannot intubate–cannot ventilate situation. *Indian J Anaesth* 2018;62:152.