Letter to Editor

Inflatable Intubation Pillow: A Clinically Validated, Height Adjustable Pillow for Optimized Airway Management

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Dear Editor,

We would like to bring to the attention of your readership a novel, frugal, and evidence-based innovation that has the potential to transform airway positioning practices — the **Inflatable Intubation Pillow**. (Fig 1a) This height-adjustable device is designed to facilitate optimal patient positioning for tracheal intubation, with proven benefits in both routine and difficult airway scenarios. (Fig 1b)

Our recent **observational clinical study**, published in, evaluated 60 adult patients undergoing elective surgeries under general anaesthesia. The study specifically aimed to assess improvements in the **Cormack-Lehane glottic view** by adjusting the patient's head elevation to achieve **external auditory meatus (EAM)–sternal notch alignment** using the inflatable pillow.[1]

The results were compelling:

- Among patients with an initial **CL Grade 3**, **83% improved to Grade 2** and **16% improved to Grade 1**, yielding **100% improvement**.
- **23% of patients** with CL Grade 2 improved to Grade 1.
- The average adjustment time was less than 30 seconds, and no adverse events or desaturation episodes were recorded.

These findings support the inflatable pillow's capacity to provide personalized, anatomical alignment of the airway axes — a key factor in successful laryngoscopy and intubation, especially when traditional methods fall short. It facilitates the "sniffing position" more reliably than conventional fixed-height supports, aligning with principles of both the **three-axis alignment theory** and **Greenland's two-curve model**.

In addition to its clinical efficacy, the pillow is lightweight, reusable, portable, and easy to disinfect, making it suitable for operation theatres, emergency departments, ICUs, and field hospitals. It can serve as a **cost-effective and customizable alternative to commercial devices** like the **Troop Elevation Pillow** / **Oxford pillow**, particularly in **obese patients** and those with higher Mallampati grades, where precise head elevation is critical for success.

We are proud to share that this innovation was recognized with the **National Excellence Award for Innovation** at the **International Conference on Anaesthesiology and Critical Care (INACC)**, further validating its clinical and technological impact.

In a healthcare environment that demands both safety and efficiency, especially in resource-limited settings, this inflatable intubation pillow presents a viable solution for standardized, ergonomic, and patient-specific airway management.

We hope this communication will spark further interest among clinicians and researchers, and we welcome opportunities for collaboration, large-scale validation, and inclusion of this device in airway carts and protocols across institutions.

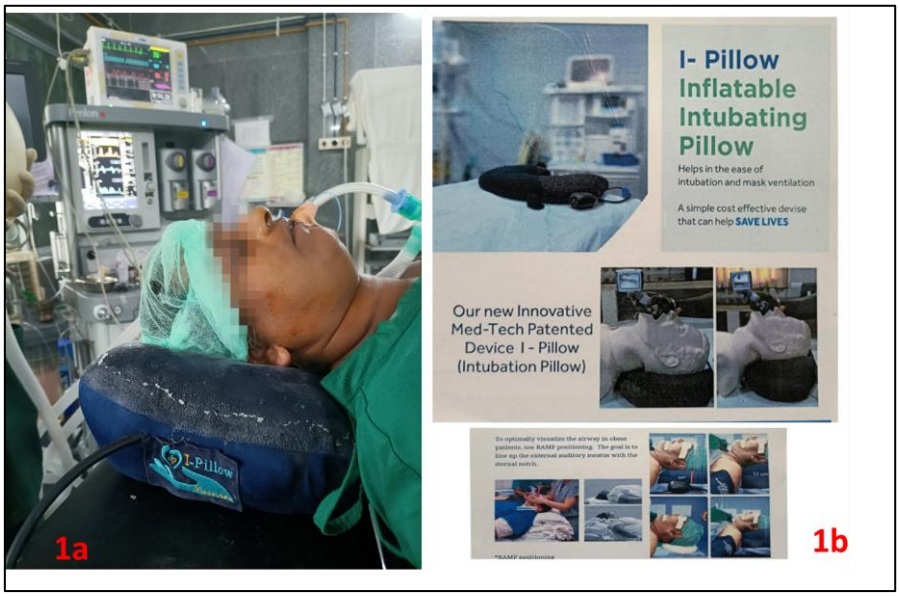

Fig 1: a) Patient position after the I-Pillow placement, b) Description of I-Pillow

References

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