

# Put pressure on the cricoid pressure

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In medicine, certain manoeuvres are established so deeply that they are dogmatically passed on from generation to generation of physicians and rewritten in textbooks without being questioned. A particularly good example is cricoid pressure (CP), used to prevent gastric regurgitation and aspiration during rapid sequence induction and intubation (RSII). Originally described by Arthur Sellick (*Sellick* manoeuvre) in 1961,<sup>1</sup> it was dogmatically applied over the decades, although literature to support its use is scarce. Its longevity is largely based on its convincingly simple, mechanistic rationale: backward force applied to the ring-shaped cricoid cartilage occludes the dorsally located oesophagus, thereby presumably preventing gastro-pharyngeal reflux. Although this technique has been repeatedly discussed and modified, it has not been convincingly questioned in a way such that it would be generally abandoned.<sup>2,3</sup>

Although the paper by Caruana *et al*<sup>4</sup> in this journal will probably also not succeed in this, it puts the *Sellick* manoeuvre in the focus of renewed research interest and extends the discussion to the prehospital setting. Although intubation of non-fasted patients requiring RSII is generally performed under optimised conditions in hospitals, prehospital RSII is frequently more challenging and may thus be more susceptible for intubation failure. Therefore, any unnecessary manoeuvre that might further

complicate or delay intubation must be avoided.

A major argument against the use of the *Sellick* manoeuvre is that it can impair laryngeal visualisation during laryngoscopy,<sup>5,6</sup> thereby prolonging or complicating endotracheal intubation. Interestingly, this study found no evidence for impaired laryngeal view; however, a higher rate of intubation-related complications was observed when CP was used (17% vs 10%). While the difference of overall complications was no longer significant after propensity score matching to correct for baseline differences between the groups, the incidence of airway trauma (3.6% vs 0.5%) remained significantly higher in the CP group after matching. It would be interesting to know the type and severity of such trauma, and whether its mechanism is directly linked to the CP. Future studies should address this aspect.

Based on our experience as anaesthesiologists and prehospital emergency physicians, we believe that the fastest intubation technique with the highest success rate and lowest chance for gastric aspiration is the technique that one routinely uses in daily practice. We are convinced that it is not the *Sellick* manoeuvre which is the key to prevent pulmonary aspiration, but a swift, well-versed intubation technique in combination with a powerful, large bore suction unit. Since we and others<sup>7</sup> regularly observe that such a suction unit is not routinely prepared, we want to emphasise that it should be available at all times when RSII is performed.

In summary, although this paper does not provide a clear-cut answer to the question whether one should perform CP, it adds an important puzzle stone to

this ongoing discussion. We encourage emergency physicians and researchers to keep challenging these dogmas to ultimately lift the quality in emergency care. Put pressure on the cricoid pressure.

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