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## In reply to "Fastrach™ intubating laryngeal mask for traumatic cervical spinal cord injury"☆



### En respuesta a «Mascarilla laríngea para intubación Fastrach® en la lesión medular cervical postraumática»

Dear Editor,

It has taken decades to develop and refine the main principles for the stabilization of the cervical spinal cord in patients with suspected or confirmed cervical damage. Under urgent circumstances in the extra-hospital setting, the endotracheal intubation is preferred over the ventilation with Ambu bag, or cricothyroidotomy. The in-line stabilization of the cervical spinal cord guarantees safe intubations when conducted through direct laryngoscopy. In the critical care and emergency settings it is advisable to have a good theoretical and practical command of five (5) basic instrumental modalities: the facial mask, one direct laryngoscope and its complements, one indirect laryngoscope/video laryngoscope, one extraglottic device (being the Fastrach® laryngeal mask the most efficient of all), and one technique with urgent subglottic access for non-intubable and non-ventilable patients. There is a double target here: be able to stop the progressive drop of SpO<sub>2</sub> levels until reaching dramatic values and be "ready to fail".

Even when the manual in-line stabilization is being used, the intubation with laryngeal mask exerts forces to the cervical spinal cord that are different from the ones exerted by the direct laryngoscopy. Sawin et al.<sup>1</sup> showed that the direct laryngoscopy elongates every cervical segment, particularly at atlantoaxial level. A study conducted by Kihara et al.<sup>2</sup> showed that intubations with laryngeal masks produce the flexion and posterior displacement of the cervical spine cord even when the manual in-line stabilization is being used. Keller et al.<sup>3</sup> and Brimacombe et al.<sup>4</sup> used cadavers to study the forces exerted during intubations with laryngeal masks with and without manual in-line stabilization of the cervical spinal cord, respectively, and confirmed the presence of posterior displacement.

These recent findings can have several clinical implications. Sawin et al.<sup>1</sup> speculate with the possibility that the direct laryngoscopy can be potentially more harmful in patients whose cervical segments are more unstable when elongated, while Kihara et al.<sup>2</sup> believe that intubations with laryngeal masks can be more harmful in patients whose necks are unstable on flexion – the most common lesion. But these risks have not been quantified yet, and the priorities during the management of the airways, in urgent situations, in patients with real or potential cervical spinal cord injuries are the ventilation and protection of such airways. The direct laryngoscopy is still the technique of choice for urgent intubations in most of these patients who suffer flexion injuries in their necks. This technique is faster, less affected by the application of cricoid pressure, and less likely to negatively damage the biomechanics of the neck commonly hurt by flexion. We would consider the intubation with laryngeal mask as the first option for the urgent endotracheal intubation of patients with a known mechanism of neck injury resulting from excessive elongation. We would use the intubation with laryngeal mask as a second option for the tracheal intubation of patients when the direct laryngoscopy has failed to succeed. Yet this requires not only the immediate availability of the device, but also training on how to use it – two requirements that are not always present.

However, the indirect methods of intubation cause less cervical movements than conventional laryngoscopies, and today they are preferred during the elective intubation of patients at risk of cervical spine cord injuries, because they allow intubations in neutral positions, improve the field of view of the glottal region, and minimize laryngeal traumas.

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