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Comparaison of two levels of laryngeal mask inflation on the occurrence of pharyngeal pain.

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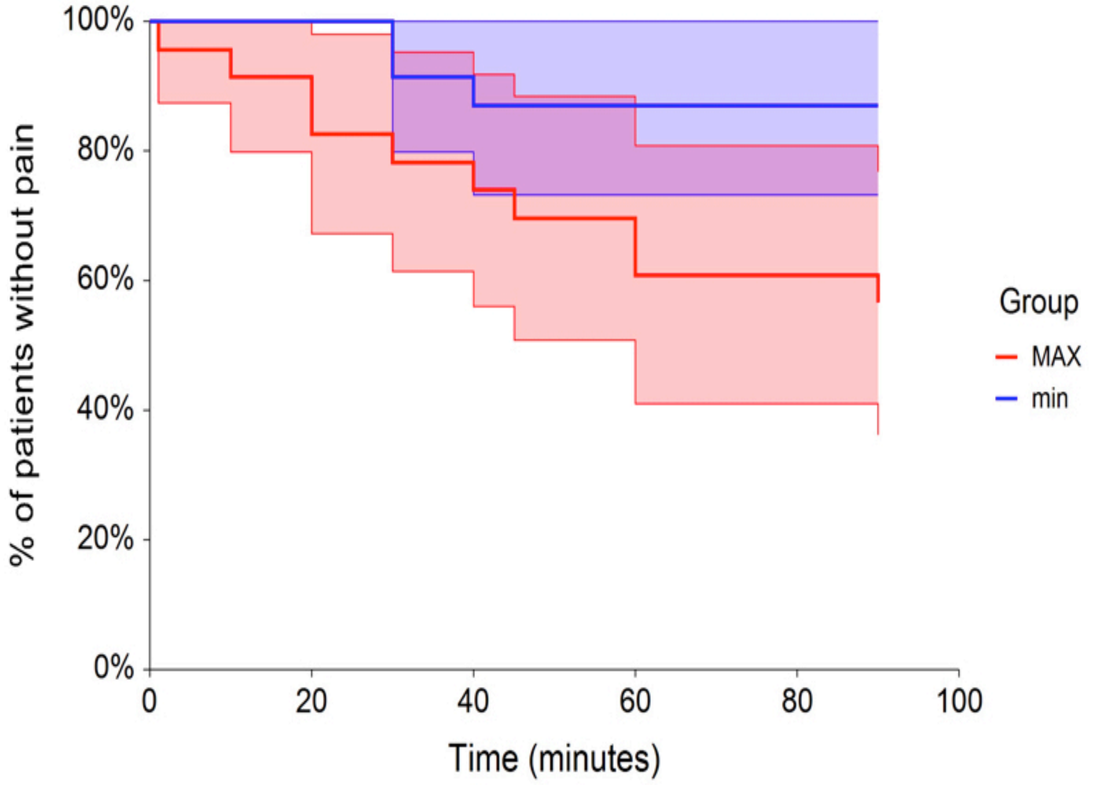
Introduction:
After the insertion of a laryngeal mask (LM), some patients experience pharyngeal pain. To the best of our knowledge, no studies have investigated a possible correlation between ML inflation pressure and postoperative pharyngeal pain. This study aimed to compare postoperative pharyngeal pain, analgesic requirement, and patients' satisfaction between two groups of ML inflation pressure.

Materials and methods:
Following IRB agreement and patients' written informed consent, we prospectively included 50 consecutive adult patients. They were randomized in two groups according to the inflation of the LM, either maximum as recommended by the manufacturer (MAX) or gradually deflated in 10 ml decrements until the appearance of a leak (min). A blinded investigator collected following data: age, weight, height, ASA physical status, delay before the first pharyngeal pain, level of pain (VAS: Visual Analogue Scale) at 4 moments (H+1, H+3, H+6, H+24), amount of tramadol administered in the recovery room and intraoperative tidal volumes (TV) (screening for possible leaks), and patient's overall satisfaction. A P-value < 0.05 was considered significant.

Results:
4 patients were excluded (2 in each group) for non-compliance with protocol. There was no difference between groups in terms of demographic data. Patients in the MAX group had earlier pharyngeal pain (significant: P = 0.024, Kaplan-Meier Test, Figure 1). There was no difference between groups in terms of tramadol requirement (mg, median[IQR], Mann-Whitney U test): (MAX: 0[0-50], min: 0[0-0], P = 0.3). There was no difference in the VAS (mean[SD], Friedman test): H+1 (MAX: 1.68[1.86], min: 1.05[1.83], P=0.59), H+3 (MAX: 0.43[0.99], min: 0.32[0.72], P=1), H+6 (MAX: 0.45[1.33], min: 1.05[1.83], P=0.7), H+24 (MAX: 0.52[1.24], min: 0.18[0.59], P=0.32). The "under-inflation" of the LM did not increase the difference between the TV (P=0.68). Both groups had the same level of satisfaction (P=0.24).

Discussion:
In our population, our results demonstrate that pharyngeal pain occurs significantly earlier in patients with LM inflated according to the manufacturer's standards. However, this pain does not influence the use of analgesics or patients' overall satisfaction. Under-inflation does not induce intraoperative leaks (TV). To the best of our knowledge, this study was never performed before. Our results must be confirmed on a larger scale.



Laryngeal mask Teleflex SureSeal Silicone cuff/PVC tube