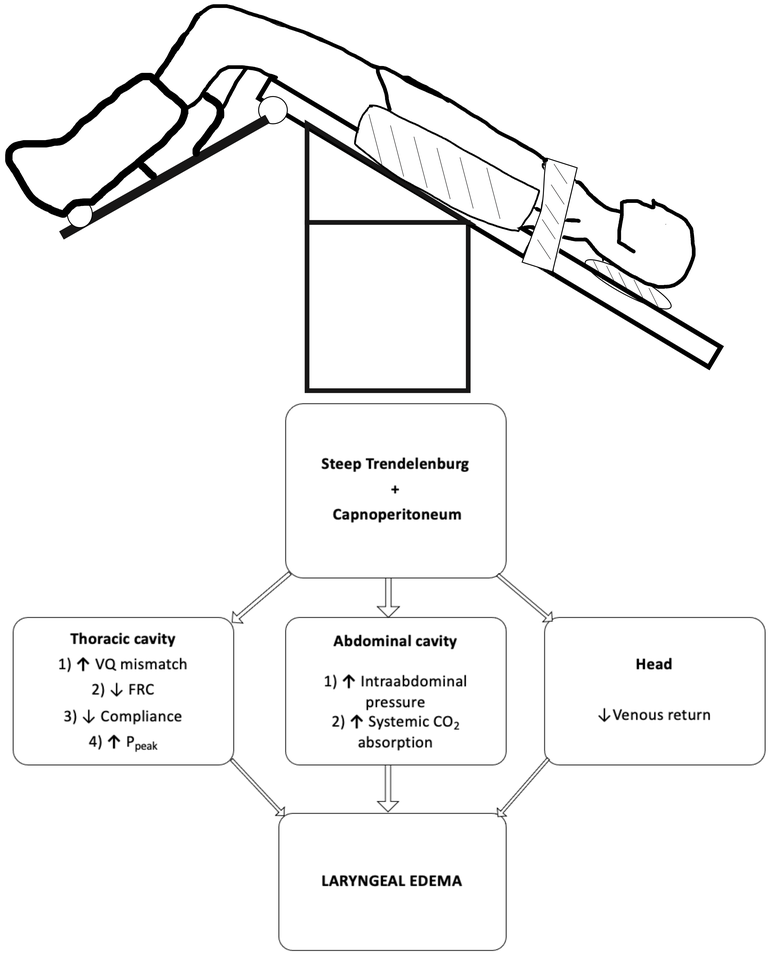
LARYNGEAL EDEMA AFTER ROBOTIC LOW ANTERIOR RESECTION

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Introduction: Trendelenburg positioning is used in colorectal procedures. Several complications can occur in patients who remain in steep Trendelenburg for a prolonged period. Laryngeal edema is one of them, and it may develop due to impeded venous return from the head and consequent swelling of the larynx. This can result in prolonged intubation time and the inability to safely extubate the patient. Most cases reported are during robotic prostatectomy.

Case Description: A 75-year-old female with a history of COPD, obesity, rectal cancer, presented for R-LAR. The duration of the case was 10 hours: 4 hours of open adhesiolysis through an upper midline incision that was partially closed with a gel port to continue the surgery robotically, that took 6 hours on steep Trendelenburg. At the conclusion of the case, the patient failed a cuff leak test and had considerable facial edema, signs consistent with laryngeal edema. The patient remained intubated for 5 days due to failed spontaneous breathing trials and was extubated on post-op day 6.



Discussion: The increase in abdominal pressure impedes the venous blood flow return from the head causing edema of the larynx. Trendelenburg position is associated with cognitive decline and, in some reports, permanent blindness. Obesity decreases chest compliance up to 60% and the functional residual capacity during general anesthesia.

Conclusions: The patient had a difficult, narrow, deep pelvis and risk factors like obesity and COPD. There is no documentation on the safest degree of Trendelenburg to avoid complications and obtain adequate exposure. Measurements to decrease the risk of laryngeal edema include reducing the time on Trendelenburg, IV/inhaled corticosteroids 4 hours prior to extubating, and avoiding fluid preload before the case. More studies are required to decrease complications after Trendelenburg positioning.

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