

# A CASE OF POSTOPERATIVE NEGATIVE PRESSURE PULMONARY EDEMA IN THE PACU

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## INTRODUCTION

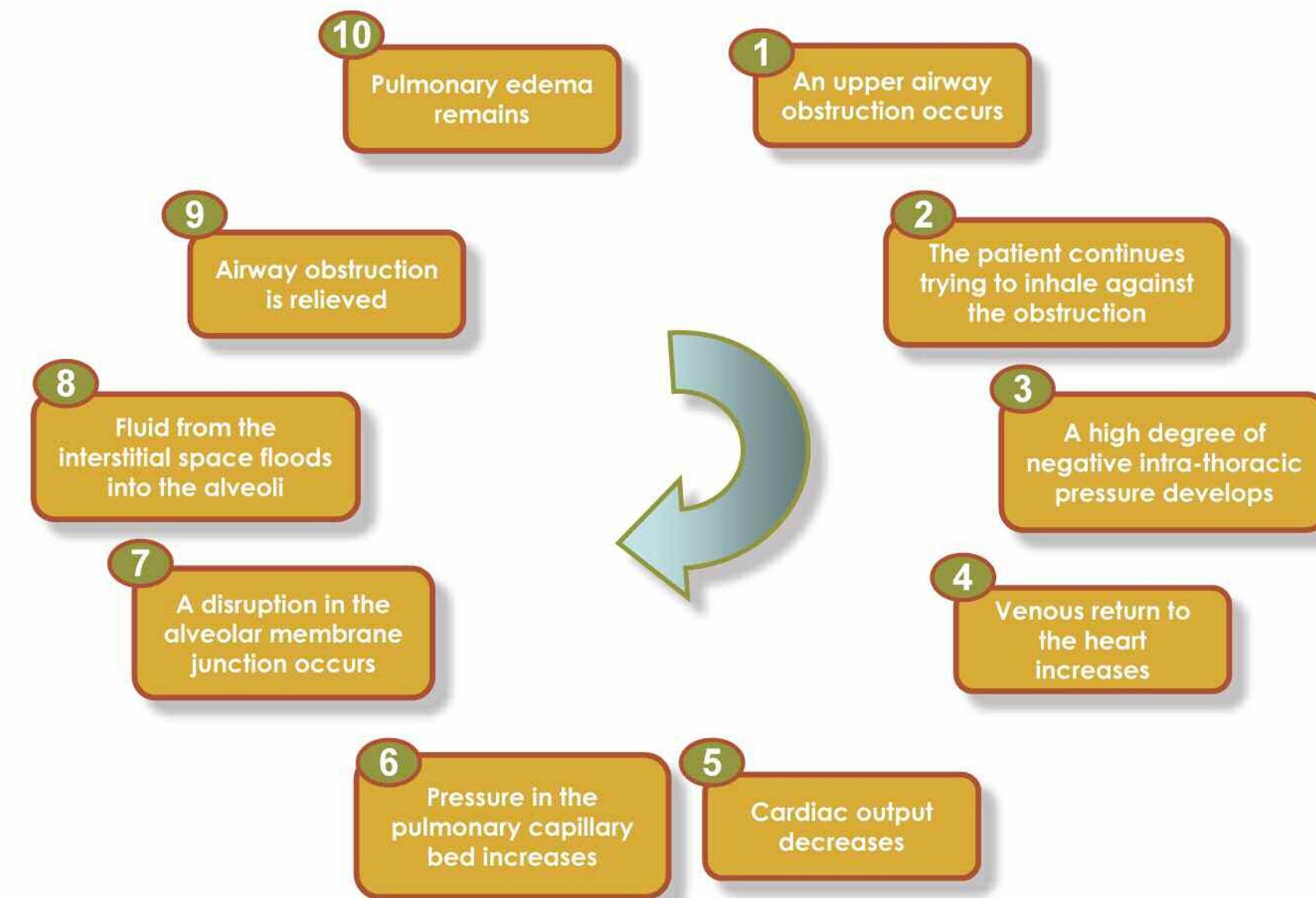
Negative pressure pulmonary edema is an uncommon complication of extubation of the trachea, most commonly caused by laryngospasm. The only large retrospective study, investigating negative pressure pulmonary edema, found its incidence to be almost one per thousand patients (0.094%). However, there are few case reports of this phenomenon in the literature. This suggests that it may be grossly underreported due to failure of recognizing it or misdiagnosing it for another condition.

## CASE REPORT

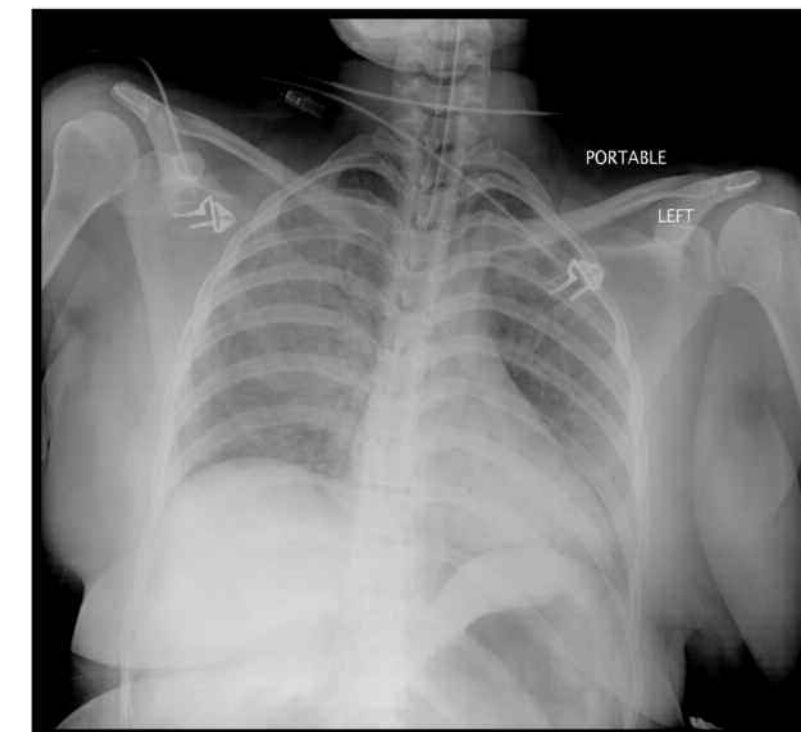
A 41-year-old female with a past medical history of HTN, obesity and anemia secondary to menorrhagia from uterine fibroids presented for total abdominal hysterectomy under general endotracheal anesthesia. After an uneventful induction, operative course and emergence, the patient was transferred to the PACU and endorsed to RN with stable vital signs and 100% oxygen saturation. Approximately 15 minutes later, the patient was noted to be apneic with severe bradycardia (HR~40's). The patient was immediately reintubated. Following intubation, *pink, frothy secretions* were noted in the endotracheal tube. The patient was noted to be more responsive and was placed on pressure support ventilation. Chest auscultation revealed bilateral rales and chest X-ray showed diffuse bilateral pulmonary infiltrates. Arterial blood sample showed: pH 7.34, PaO<sub>2</sub> 89, PaCO<sub>2</sub> 45, SaO<sub>2</sub> 95% with FIO<sub>2</sub> 0.5. Bedside echocardiogram, EKG and cardiac enzymes obtained were all within normal limits. The patient was transferred to the ICU for further monitoring and was successfully extubated 6 hours

later. The patient was subsequently transferred to the medical floor the following day. Two days later, the chest radiograph showed a complete resolution of the pulmonary infiltrate. The remainder of the hospital course was uneventful.

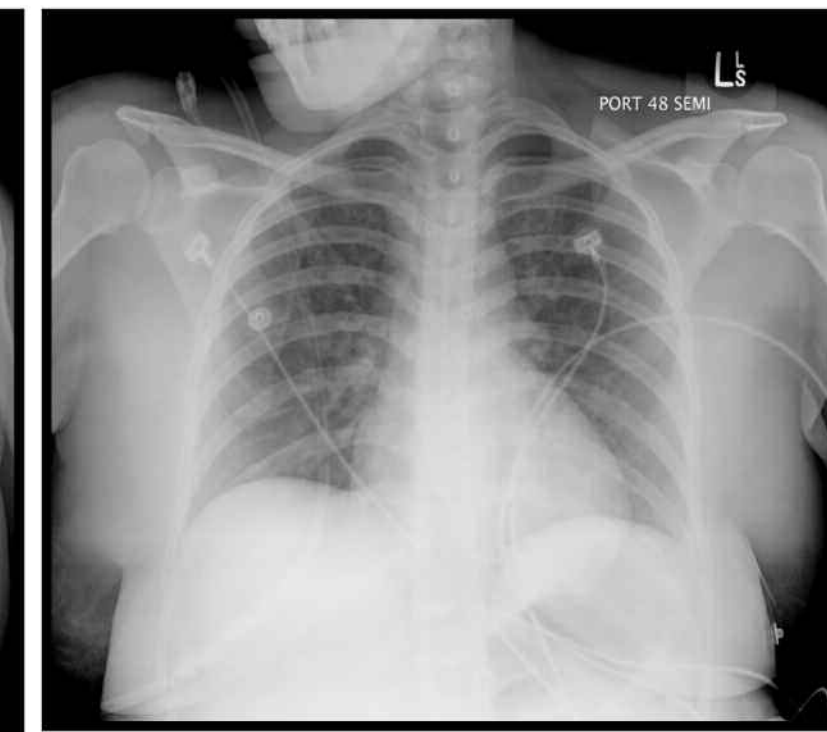
### Mechanism of Negative Pressure Pulmonary Edema



Lorch, D., et. al. Post-extubation Pulmonary Edema Following Anesthesia By Upper Airway Obstruction. Are Certain Patients at Increased Risk? *Chest* 1986;90:802-805



Post Intubation X-ray



Post Op Day 2

## REFERENCES

- Krishnaprasad, D., et. al. "Negative Pressure Pulmonary Edema after Acute Upper Airway Obstruction." *Journal of Clinical Anesthesia* vol. 9, August 1997
- Westreich, R. et. al.
- "Negative-Pressure Pulmonary Edema After Routine Septorhinoplasty." *Archives of Facial and Plastic Surgery* 2006; Vol 8, Jan/Feb