ANESTHETIC MANAGEMENT OF AN ADULT PATIENT WITH CYSTIC FIBROSIS: A CASE REPORT

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BACKGROUND

Cystic fibrosis is an hereditary disease which makes patients very complicated to ventilate and carry high risk complications in urgent abdominal surgery under general anaesthesia.

CASE REPORT

• 48-years old male patient (Weight: 85kg Height: 175cm) with cystic fibrosis, presented a **severe lung affectionation**.

• He developed an acute respiratory failure that indicated his admission in the ICU, and required mechanical ventilation and tracheotomy. Two weeks after, he was diagnosed of a

subphrenic abscess due to an intestinal perforation and was scheduled for right colectomy. The patient was transferred sedated and ventilated from the ICU to the OR, after administrating inhaled salbutamol.

Induction:

- Intraoperative monitoring included pulse oximetry, electrocardiogram, invasive blood pressure, capnography and bispectral index.
- Tracheal 8mm cuffed-tube connected to tracheotomy.
- Fentanyl, propofol and rocuronium were used to anaesthetic induction.

Maintenance:

- Sevoflurane, fentanyl and cisatracurium.
- Mechanical ventilation: **high FIO2** (80%), **protective ventilation** (TV 400mL, RR 20/min but no PEEP)
- The persistence of high ventilator pressure (38mmHg) justified the placement of a **temporary VAC**.

Emergence: Patient returned to the ICU at the end of surgery with no further problems. On day 20, due to a difficult weaning from mechanical ventilation, he was transferred under mechanical ventilation on his tracheotomy (PSV + CPAP) to the pneumology service, and discharged from hospital after 3 months.

DISCUSSION

In patients with CF, emergent surgery increases highly the morbidity. Intraoperative management is the key to good results. Mechanical ventilation should limit pulmonary pressure (lower tidal volume and higher respiratory frequency are tolerated better than PEEP in this case). The surgical team should take into account the risk of high intra-abdominal pressure. Coagulation should be closely monitored, since it can be altered secondary to malabsorption and liver disease, which can increase bleeding.

CONCLUSION

CF is increasing among adults scheduled for surgery. Anesthetic management should protect the already sick lung, and this involves a perfect knowledge of all factors that alter lung compliance and treatments to avoid respiratory complications.

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