**Respiração (Respiration)**

**Título: PNEUMOTHORAX WITH PERIORBITAL AND THORACIC SUBCUTANEOUS EMPHYSEMA FOLLOWING LAPAROSCOPIC SURGERY**

**Autores: Filipa Andrade da Cunha (Apresentador), Carolina Rodrigues (1º Autor), Sandra Sacramento, Dora Catré, José Pedro Assunção**

**Instituições: Centro Hospitalar Tondela-Viseu**

**Área Terapêutica/Tema: Respiração (Respiration)**

**Resumo:**

**Laparoscopic surgery for gallbladder removal is a common procedure and the preferred approach in many surgical centres.**

**Pneumothorax and subcutaneous emphysema after insufflation of gas into the peritoneal cavity, during general anaesthesia, are rare complications. Pneumothorax is a potentially life-threating complication that may occur as a result of pulmonary barotrauma from positive pressure mechanical ventilation, or direct injury to the diaphragm during gas insufflation. Subcutaneous emphysema can vary from isolated and confined to a small space, to extensive extravasation of gas outside of the abdominal cavity extending into the thorax and periorbital area. There are multiple risk factors leading to subcutaneous emphysema during laparoscopic procedures such as multiple attempts at abdominal entry, increased intra-abdominal pressure, improper cannula placement, increased total gas volume and flow rate.**

**This case reports a 69-year-old male patient, ASA II, submitted to urgent laparoscopic cholecystectomy. After peritoneal insufflation, a small increase in EtCO2 was detected which was corrected with adjustments of ventilatory settings and surgery proceeded uneventfully. At the end of the procedure, extensive subcutaneous emphysema was detected by the presence of crepitus on abdominal and chest wall, neck and periorbital area, with left side predominance. The chest X-ray performed in the operating room revealed left pneumothorax. A chest tube was placed for decompression and the patient was extubated without other complications. In the post anaesthesia care unit he presented normal arterial blood gas analysis and remained hemodynamically stable. The patient was then transferred to an intermediate care unit. Pneumothorax and subcutaneous emphysema resolved within the next 24 hours, without evidence of respiratory insufficiency, and the chest tube was removed. Three days later, the patient remained asymptomatic and was discharged home.**

**The management of these complications requires a high index of suspicion, good communication and collaboration with surgeons and tight postoperative monitoring.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**