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A Case of Endotracheal Tube Damage Caused by an Ultrasonic Cutting Instrument during Anesthesia for a Partial Maxillectomy

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Abstract

In oral and maxillofacial surgery, the airway is often adjacent to the surgical field, increasing the risk of tracheal tube damage. We report a case of intraoperative endotracheal tube injury caused by an ultrasonic cutting instrument during a partial maxillectomy and successful reintubation using a video laryngoscope. An 81-year-old woman underwent a partial resection of the left maxilla under general anesthesia for the treatment of a maxillary gingival carcinoma. Nasal intubation was performed using a video laryngoscope. During surgery, a ventilator alarm indicated a reduced minute ventilation. On inspection, damage to the nasotracheal tube was identified. Reintubation under video laryngoscopic guidance was promptly and safely performed without oxygen desaturation. This case highlights the need for careful preoperative planning, including the selection of an appropriate intubation route and preparations for possible reintubation, especially in surgeries involving shared surgical and airway fields. In the present case, the progression of the tumor had brought the nasotracheal tube into the operative field. The oral surgeon assumed that the ultrasonic cutting instruments, which are commonly used for cutting soft tissue, would not damage the soft tracheal tube. However, polyvinyl chloride (PVC), a standard material used in tracheal tubes, can absorb ultrasonic energy and is susceptible to both thermal and mechanical injury. Preventing such incidents requires thorough interdisciplinary communication and awareness of equipment-specific risks, particularly when energy-based surgical tools are used near airway devices.

Keywords：NASAL INTUBATION, TRACHEAL TUBE DAMAGE, MAXILLARY GINGIVAL CANCER SURGERY, ULTRASONIC CUTTING INSTRUMENT, VIDEO LARYNGOSCOPE
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A Case of Dental Treatment under Intravenous Sedation for a Patient with SENDA/BPAN

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Abstract

Beta-propeller protein-associated neurodegeneration, formerly called static encephalopathy of childhood with neurodegeneration in adulthood, is a disease caused by mutations in the autophagy gene *WDR45*. The clinical course over time is very specific：non-progressive epilepsy, intellectual disability, and motor developmental retardation are seen in childhood. From adolescence to adulthood, rapid neurological regression occurs, and dystonia and parkinsonism develop, along with progressive dysphagia. Eventually, the patient becomes bedridden. We performed dental treatment under intravenous sedation in a school-aged child with beta-propeller protein-associated neurodegeneration. Because of the patient's dysphagia, sedation was carefully administered to a level that prevented any loss of the swallowing reflex. Water injection was kept to a minimum, and the injected water was rapidly suctioned away. Cervical auscultation was used continuously to monitor the patient's respiratory status and to ascertain the presence of fluid retention in the pharynx. Midazolam and propofol were selected as the primary sedatives because of their anti-epileptic effects. Although a small bolus of intravenous propofol was also administered, a continuous infusion was not used.

Keywords：STATIC ENCEPHALOPATHY OF CHILDHOOD WITH NEURODEGENERATION IN ADULTHOOD/BETA-PROPELLER PROTEIN-ASSOCIATED NEURODEGENERATION, NEURODEGENERATION WITH BRAIN IRON ACCUMULATION, EPILEPSY, DYSPHAGIA, INTRAVENOUS SEDATION

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Delayed Traumatic Hemopneumothorax during General Anesthesia in a Patient with a Mandibular Fracture：A Case Report

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Abstract

Late-developing traumatic pneumothorax and hemothorax can occur in patients with chest trauma. We report a case of delayed traumatic hemopneumothorax that occurred during general anesthesia in a patient with a mandibular fracture associated with chest trauma. A 51-year-old male (170 cm, 87.2 kg, BMI 30) fell and sustained multiple bilateral rib fractures as well as fractures of the sternum, clavicle, right humerus, and mandible. A preoperative chest CT revealed no obvious lung laceration or pneumothorax；however, mild bilateral hemothorax was suspected. After the induction of general anesthesia, the patient became inadequately oxygenated. Endotracheal suctioning was performed, but the patient's SpO_2 dropped rapidly. Repeated recruitment maneuvers were performed, and the SpO_2 improved. After surgery, endotracheal suctioning caused the SpO_2 to decrease once again, and recruitment maneuvers were required more frequently. A chest CT was performed under general anesthesia to investigate the cause of the reductions in SpO_2. The results revealed bilateral hemothorax, right pneumothorax, subcutaneous emphysema in the right thoracic region, and atelectasis in the posterior dorsal region. The respiratory surgeon performed an urgent thoracic drainage of the right hemothorax. The patient was extubated three days later. In addition to factors such as obesity and a smoking habit, the patient had difficulty producing sputum preoperatively because of pain from the rib fractures, which led to the atelectasis. The repeated need for high-pressure recruitment maneuvers to maintain oxygenation may have contributed to the development of the delayed traumatic hemopneumothorax. Perioperative management of patients with chest trauma should be conducted under adequate medical care, since the delayed onset or exacerbation of traumatic hemopneumothorax is possible.

Keywords：TRAUMATIC HEMOTHORAX, TRAUMATIC PNEUMOTHORAX, DELAYED, CHEST TRAUMA, GENERAL ANESTHESIA

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