LARYNGOSPASM IN PEDIATRIC ANESTHESIA

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Laryngospasm is a common and critical complication in pediatric anesthesia procedures. This protective reflex of the upper airways, triggered by spasm of the glottic muscles, aims to prevent foreign substances from entering the tracheobronchial tree. When exacerbated, laryngospasm results in complete closure of the glottis, obstructing breathing and causing hypoxia, hypercapnia, bradycardia, cardiac arrest and negative pressure pulmonary edema, factors associated with morbidity and mortality. The objective of this study was to carry out a literature review on strategies for prevention, diagnosis and management of laryngospasm in children under anesthesia. The search covered databases such as Google Scholar, PubMed and Scielo, using the descriptors "laryngospasm", "pediatrics" and "anesthesia". Articles published in the last twenty years in Portuguese and English were selected, dealing with laryngospasm in pediatric patients. In order to prevent laryngospasm, it is essential to identify the pediatric population as being at greater risk, taking into account factors such as emergency surgery, infections, upper airway surgery, exposure to home smoking, anatomical abnormalities of the upper respiratory tract, gastroesophageal reflux and high body mass index. In addition, it is recommended to ensure an adequate level of anesthesia prior to intubation, preferably with mild agents such as propofol. The administration of oral benzodiazepines, as well as the use of intravenous or topical lidocaine prior to intubation, has been shown to be beneficial. Magnesium supplementation is suggested to prevent laryngospasm. Early diagnosis involves observing clinical signs such as suprasternal retraction, paradoxical chest and vigorous abdominal movements. In cases of complete laryngospasm, there is no respiratory movement and the capnography curve is absent. Later on, hypoxemia can be observed, followed by bradycardia and central and peripheral cyanosis Treatment includes identifying and removing the triggering stimulus, mandibular elevation maneuvers, positive pressure ventilation using 100% oxygen, and deepening the anesthetic plane with propofol or sevoflurane. If there is no improvement, the administration of atropine followed by succinylcholine is indicated. In serious situations, procedures such as cardiopulmonary resuscitation and tracheal intubation may be necessary, with the collaboration of another anesthesiologist. Therefore, the significant complexity, high incidence and critical nature of laryngospasm in pediatric anesthesia procedures justifies this study. The prevention, diagnosis and treatment strategies discussed provide essential information to help reduce the morbidity and mortality of this complication.

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