



Complications and risks associated with regional anesthesia

Complicações cirúrgicas em pacientes pediátricos

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ABSTRACT

Introduction: Regional anesthesia is a technique widely used in medical practice to provide analgesia and anesthesia in a specific region of the body. Although it is considered safe and effective, it is not without complications and risks. Understanding and properly assessing these complications is critical for health care professionals involved in anesthesia practice to ensure patient safety and provide the best possible care. **Objectives:** The aim of this narrative review article is to analyze the complications and risks associated with regional anesthesia, highlighting their clinical manifestations, risk factors, prevention and management. **Theoretical Background:** Complications related to regional anesthesia can be categorized into 3 topics: technique-related complications, systemic complications, and complications specific to each nerve block technique. Technique-related complications include block failure, paresthesia, nerve injury, hematoma, infection, and vascular complications. Systemic complications may occur due to local anesthetic toxicity, such as cardiac arrhythmias, seizures, and respiratory depression. **Methodology:** This narrative review was based on the electronic databases of PubMed, Scopus and Web of Science, with 4 descriptors: "complications", "risks", "regional anesthesia". The selected articles addressed the complications and risks associated with regional anesthesia in clinical studies, systematic reviews, meta-analyses and case reports. **Final Results:** Regional anesthesia is a widely used technique. Block failure, nerve injury, vascular complications, allergic reactions, local anesthetic toxicity and systemic complications are some of the complications identified. Several risk factors have been associated with these complications, highlighting the importance of careful preoperative assessment and proper selection of anesthetic technique. Prevention and proper management of complications are essential. This includes the use of proper



techniques, continuous monitoring during the procedure, knowledge of the signs of local anesthetic toxicity, and readiness for immediate interventions.

Keywords: Complications, Risks, Regional anesthesia.