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ADVANCES IN RECENT TECHNIQUES OF SOFT TISSUE TRAUMA IN CHILDREN

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Introduction: Childhood injuries contribute to more than 20% of all injury cases, making the prevention and treatment of such injuries a pressing medical and social concern, as underscored by the World Health Organization (WHO). Over the past two years, childhood trauma has ranked as the second leading cause of visits to the Department of Maxillofacial Surgery. The selection of the most effective treatment method is crucial as it impacts the child's jaw and tooth development, chewing and speech functions, and overall appearance. Objective: This study aims to assess recent techniques in treating soft tissue trauma in children. Materials and Methods: A comprehensive review of bibliographic sources published between 2013 and 2024 was conducted using databases such as PubMed, Google Scholar, Oxford Academic, and Medline. Results: Accurate assessment and classification of soft tissue injuries are the initial steps in their treatment. Early intervention and closure of such injuries are associated with improved functional and aesthetic outcomes and reduced risk of complications. Management of soft tissue injuries involves controlling bleeding, thorough wound irrigation, debridement of necrotic tissue, and removal of foreign bodies before closure. Administration of antibiotics and tetanus prophylaxis are essential in wound care, particularly for infected wounds. Various tissue engineering approaches, including the use of growth factors, play a vital role in promoting optimal wound healing by influencing various stages of the process. Techniques such as direct cell transplantation or application of growth factors can accelerate healing. Additionally, fibrin glue or sealant can be used to deliver cells or growth factors. Platelet-rich plasma (PRP) and tissue-engineered skin or mucosa substitutes serve as scaffolds to promote healing. Soft tissue injuries resulting in tissue loss often require flap reconstruction, which can be tailored based on the type, location, and severity of the damage.

Conclusion: Recent advancements in soft tissue trauma management offer promising techniques for optimizing wound healing and preserving tissue integrity in children.

These advancements encompass various approaches, including tissue engineering and flap reconstruction, tailored to the specific needs of each patient.

References:

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