

عنوان مقاله:

Custodial Cardioplegia and Cardiac Preservation during pediatric Cardiac Surgery Procedures: A Narrative Review

محل انتشار:

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خلاصه مقاله:

Controlled intraoperative cardioplegia is indispensable to pediatric cardiac surgery procedures. Several preservation techniques have been proposed for such purposes, with varying application by different surgeons. The custodial cardioplegia is a recent approach that is considered to be a safe and effective cardiac protector. This narrative review was conducted via searching in four databases, including PubMed, Scopus, Embase, and ScienceDirect. The studies focused on the efficacy and safety of custodial cardioplegia reviewed, especially in pediatric cardiac surgeries and relevant procedures. In total, 21 articles were eligible, and the findings highlighted the controversies regarding the use of various cardioplegic solutions and the variability of their application by surgeons. However, data were inadequate regarding the optimal cardioplegic solutions in this regard. Some of the studies performed on adults suggested that custodial cardioplegia may be equivalent to conventional blood cardioplegia. Most of the reviewed articles showed a consensus on the safety and efficacy of custodial cardioplegia in adult and pediatric cardiac surgeries. It is believed that custodial procedures are not only easily delivered, but they are also convenient and less time-consuming and provide long-lasting motion and bloodless fields for the surgeon to perform the operation. Therefore, use of custodial cardioplegia has been reported to be safe, effective, and cost-efficient compared to conventional cardioplegic solutions. However, different findings have also been denoted in some of the studies in this regard, implying the equal effectiveness of these techniques.

کلمات کلیدی:

Cardioplegic solution, Custodial, pediatric cardiac surgery

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