"AN IN-VITRO COMPARATIVE STUDY OF ZINC POLYCARBOXYLATE, ZINC PHOSPHATE, GLASS IONOMER AND 3M VITREMER (ZERO SOLUBILITY) LUTING CEMENTS ON STAINLESS STEEL CROWN RETENTION IN PRIMARY MOLARS"

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The introduction of stainless steel crown by Humphrey[25] proved to be a boon to clinical pediatric dental practice, providing a simple and expenditious means of restoring teeth which had previously been condemned to extraction forceps or which required extensive and costly preparations for cast gold restoration[51]. Stainless steel crown is an established approach to restoring a primary molar particularly for multisurface lesions in the first deciduous molars before the eruption of first permanent molar[13,14,15,49]. This extracoronal restoration soon became popular because of its ease in handling, workability, high percentage of success and economy of cost, as compared to multisurface amalgam or cast gold restoration, with a success rate of 70% compared to 11% for amalgam[3,34]. The longevity of the stainless steel crown has been proved by some studies, which indicate that they are retained until the tooth exfoliates or is extracted for orthodontic purposes with a median survival time greater than 7.64 years[3,51,54].

The ultimate objective of any stainless steel crown technique is a biologically tolerable, masticatoraly competent and clinically acceptable restoration[5]. In order to achieve the retention, many tooth-preparation and crown manipulative procedures and use of various luting cements, have been proposed over years. It includes, conservation of tooth structure as much as possible, conservative preparation in cervical perimeter to retain undercut areas, placing the margins subgingivally, adapting the crown margin as closely as