"ASSESSMENT OF VIABILITY OF HUMAN PERIODONTAL LIGAMENT CELLS IN DIFFERENT FAT CONTENT OF MILK AT DIFFERENT TIME INTERVALS"

by

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ABSTRACT

Background & Objectives: Traumatic injuries are a common occurrence that require both expedient and informed management by Pediatric dentist. Exarticulation injuries constitute around 16% of all traumatic injuries to permanent anterior teeth, out of which only 2% cases report to dental office with the exarticulated tooth. The greatest success of a replanted exarticulated tooth occurs when it is immediately replanted, which is not always practical. Numerous storage medias have been investigated for this purpose and are available in market. The purpose of this present study was to identifying a storage medium which is effective, economically favourable and readily available for the general population.

Method: In this study, 60 human premolars undergoing extraction for orthodontic purpose were selected. The teeth were kept in the test tube containing the 3 experimental storage media for 1,2,4,6 and 24 hrs intervals. The teeth were then treated with collagenase and were incubated for 60 min after the addition of fetal bovine serum. The test tubes were then placed in the centrifuge after which the apical two third of the roots were scraped to obtain periodontal tissue and slides were prepared using trypan blue stain and cells were counted and statistically analyzed.

Results: Statistical analysis showed that Low fat milk preserved significantly more viable PDL cells ($p<0.05$) compared with Medium and High fat milk.

Interpretation & Conclusion: Low fat milk appeared to be a superior storage media in maintaining PDL cell viability when compared to Medium and High fat milk solution.