

Evaluation of Restorative Procedures in Children following Dental Rehabilitation under General Anesthesia

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Abstract:

The present study was carried out to assess the success of oral rehabilitation performed under general anesthesia (GA) in the "Special Care Unit", in the Department of Pediatric and Community Dentistry, Faculty of Dentistry, Alexandria University, in terms of restoration survival and absence of new/recurrent caries.

The study involved 93 healthy patients who had previously received oral rehabilitation under GA in 2002-2003 and who were recalled for follow up examinations after a time period ranging from 20-42 months. The mean age of the children was 3.79 ± 1.23 years. Data were collected from the children and their families through clinical examination to assess the success of the restorations previously inserted under GA and the presence of new caries. Background information about the education and occupation of parents as well as dietary and oral hygiene habits and visits to dentists were also collected through a questionnaire. Kaplan Meier survival analysis was performed to determine the mean survival time in months of the different restorations. Cox regression model was used to examine the effect of different variables on the time to restoration failure. Logistic regression was used to study the effect of different variables on presence of new caries in different surfaces.

The failure rate for anterior restorations was 49.3% and 12.7% for posterior restorations with a total number of restorations failing = 207 out of 746 initially inserted. The longest and shortest survival times were for strip crowns and anterior glass ionomer for anterior restorations (38 and 32 months respectively) and for posterior restorations stainless steel crowns and amalgam (40 and 36 months respectively). Not visiting the dentist increased the hazards of failure of both anterior and posterior restorations (hazards

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ratio = 1.54 and 1.89 respectively). Out of 42 subjects who had new caries lesions, 29 had proximal lesions with a total number of new caries lesions on any surface = 53. Not eating snacks significantly lowered the risk of new caries on any surface (odds ratio= 0.05, CI= 0.01, 0.19).

Strip crown and stainless steel crown had the longest survival times among anterior and posterior restorations. In spite of the radical treatment delivered to these children, they will need further treatment mostly to replace failed restorations.