

Evaluation of Decompression in the Treatment of Odontogenic Keratocysts : A Clinical and Radiographic Study

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ABSTRACT

Background and Objectives: Keratocyst is the most aggressive entity of odontogenic cysts with a high tendency to recur after enucleation. This objective of this study was to assess the effect of decompression in inducing cyst shrinkage before enucleation.

Materials and Methods: A prospective non-randomized clinical study was conducted on 11 patients with odontogenic keratocyst presenting to the department of maxillofacial surgery, university-affiliated teaching hospital, between February 2016 to March 2021. There were 8 males and 3 females, with a mean age of 57 years. Tube decompression was conducted as a preliminary treatment, before enucleation. The size of the cyst was measured orthopantomographically pre- and post-decompression. The percentage reduction was estimated, as was the correlation of cyst shrinkage with the initial size of the lesion and age of the patient.

Results: The mean duration of decompression was 208 days (152-316). The cyst size before and after decompression was 14.51 cm² (5.63 cm² -32.37 cm²) and 6.69 cm² (1.76 cm²-14.81 cm²), respectively. The total and monthly percent shrinkage of the cysts were 54.39% (37.29% -76.37%) and 7.84% (4.45% -11.27%), respectively. The initial size of the lesion did not correlate significantly with the percentage of reduction, whereas the age of the patients showed a significantly negative correlation with the percentage of reduction.

Conclusions: Decompression is a well-tolerated minimally invasive surgical treatment that leads to a significant reduction in the size of the cyst. It induces the cyst to shrink away from anatomical structures to reduce the morbidity associated with subsequent enucleation.

Keywords: Decompression, Enucleation, Image J, Keratocyst, Orthopantomograph

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