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Evaluation of the relationship between the expression of AgNOR and Ki67 with the recurrence rate in central granulomatous giant cell lesions: A case-control

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Abstract:

Objectives: Giant cell granuloma is a local nonneoplastic lesion that is divided into two categories, based on its site of occurrence: Central and peripheral giant cell granuloma. Central giant cell granuloma is an intraosseous lesion that has a tendency to recure even in surgically treated cases. Several studies have proven that there is an association between different lesions clinical behavior and their histological features. The aim of this study was to evaluate the expression of AgNOR and Ki67 in lesions with and without recurrency.

Material and Methods: Files and records of 35 patients who had been histologically diagnosed with central giant cell granuloma were investigated. Histological features were studied after performing AgNOR staining and Ki67 marker. The data were analyzed by chi-square, Fisher, and T-test.

Results: Acquired data indicated that the count of AgNOR staining and Ki67 marker was significantly higher in lesions with recurrency than the lesions with no recurrency. The same results were attained from Ki67 intensity.

Conclusion: The current study indicated that AgNOR staining and Ki67 marker have prognostic value in predicting recurrency of central giant cell granuloma lesions.

Background

According to WHO classification, CGCG is a benign nonodonto-genic connective tissue neoplasm that develops in the hard tissue of bone and it has 7% prevalence among jaw tumors. This lesion usually occurs in the anterior part of mandible and has a tendency among young female patients and two-thirds of cases are patients under 30 years old. The origin of CGCG is not completely clear. It can be a reactive lesion, a benign neoplasm or a developmental anomaly. CGCG is asymptomatic in primary phases but, there is a matter of time till it expanses cortical bone.

As we mentioned, recurrence rate of CGCGs is relatively significant and it might be associated with its histological features. Among available staining and markers, Ki67 and AgNOR are considered as reliable ones for predicting clinical behavior of lesions. The aim of this study is to Evaluate the relationship between the expression of AgNOR and Ki67 with CGCG lesion's recurrence rate. The results can be useful for obtaining an accurate treatment plan for each individual case.

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