

Histological & Immunohistochemical Analysis of Resected Discs From Cases Of Anterior Disc Displacement Without Reduction and Ankylosis

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Abstract

Most of the temporomandibular joint disorders (TMJ) are related to malposition and deformity of the articular disc as in disc displacement with or without reduction as well as complete union of the articulating surfaces as in ankyloses. Most of these disorders result in malorientation and degeneration of disc architecture leading to loss of its function. On the other hand, surgical preservation of TMJ discs in case of disc displacement and ankylosis were proposed to decrease friction and decrease the rate of recurrence. Therefore, this study aimed at assessment of histopathological changes of resected discs during management of anterior displacement without reduction (ADDwoR) and ankylosis to appraise its structure accommodation to function after trauma. Histopathological and Immunohistochemical analyses of resected discs collected from ten patients with either ADDwoR or ankylosis were performed at different bands of discs using anti-apoptotic protein, surviving, as degenerative expression. The anterior band of the ankylosed discs showed more degenerative cartilaginous matrix changes than the ADDwoR. Although both cases revealed cartilaginous matrix in the intermediate zone (the highest surviving expression), ankylosis only was invaded by blood vessels. On the other hand, the posterior disc attachment (PDA) appeared more degenerated in ADDwoR rather than in ankylosis. It is concluded that, the degeneration of discs in both ADDwoR and ankylosis are reflected by their surviving expression interfere with disc function. In addition, the detected high vascularity of the ankylosed discs may act as nidus for reankylosis.

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