Novel Understanding of the Histogensis of Central Giant Cell Tumour of Long Bones in Comparison to Giant Cell Lesions of the Jaw

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Abstract:

Peripheral giant cell granuloma (PGCG) resembles central giant cell granuloma (CGCG) of the jaw, the former might be its soft tissue counterpart although, may have an osteolytic effect in addition central giant cell tumor of long bone (CGCT) is a benign tumor, locally aggressive and considered to be potentially malignant neoplasm at which giant cells may result from fusion of the mononuclear cells. The term "giant cell lesion" has given the impression of giant cells as being the major neoplastic component of these lesions. The aim of the study is to compare the expression of CD68, ki67 and osteopontin in PGCG, CGCG of the oral cavity and CGCT of long bone, for proper diagnoses and assessment of the behavior of these lesions, a trial to delineate histogenic origin of mononuclear stromal cells (SC) and multinucleated giant cells (GC) in such cases. Sections from three lesions were collected examined by Ki 67 as proliferating marker and for CD68 and osteopontin for staining the stromal and multinucleated giant cells. Positive immunostaining of stromal, giant cells for both CD68 and osteopontin may point to the delineation of giant cells in the three lesions is macrophages which might be reactive in nature rather than neoplastic. PGCG might be their soft tissue counterpart as bone destruction; the aggressiveness in the CGCG as well as CGCT could be due to inflammatory substances. Some CGCT of long bones may be misinterpreted as true giant cell rich tumors although they are inflammatory reaction mediated by osteopontin.

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