

EXPRESSION of RECEPTOR ACTIVATOR of NUCLEAR FACTOR kappa-B LIGAND (RANKL) in RHEUMATOID SYNOVIA

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Background: Rheumatoid Arthritis (RA) is characterized by massive proliferation of synovia and irreversible bone destruction in affected joints. Although bone absorption by osteoclasts may be a natural physiological phenomenon as bone remodeling, activated osteoclasts certainly have a critical role in bone destruction in RA. Receptor activator of nuclear factor kappa-B (RANK) and RANK-ligand (RANKL) system may be an important in rheumatoid bone destruction through the osteoclastogenesis. Objectives: We study to clarify the localization of RANKL and its contribution to osteoclastogenesis in rheumatoid synovia. Materials and methods: Synovial tissues and eroded bone were collected from RA patients with patient's consents in our hospital. Immunohistochemical staining for RANKL and immunohistochemical transmitted electron microscopic method were performed. Results: RANKL expressed on fibroblast-like cells and round mononucleare cells abundantly in the rheumatoid synovia. Expression of RANKL was found in subchondral areas of RA bone also on the multi-nuclear cells. Conclusion: The RANKL expression, which also observed in normal synovia, is activated and take a significant role of osteoclastogenesis in rheumatoid bone resorption.