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Effect of *Cibortium barometz* on Collagen-Induced Arthritis

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Object

To investigate whether the bone preserving effect of *Cibortium barometz* could be further improved by the addition of a bone anabolic agent in inflammatory arthritis

Material and Methods

Material; *Cibortium barometz* was collected from the Gyeonggi-do in May 2006.

Methods; DBA1/J mice with either adjuvant-induced arthritis (AIA) or collagen-induced arthritis (CIA) were treated for 28 days with *Cibortium barometz*. Treatment effects were assessed histologically and by morphometry for the extent of paw swelling and bone erosive changes.

Results and Discussion

Adjuvant-induced arthritis (AIA) is a rat RA model that mimics many of the clinical and pathological features of human RA. Immunohistochemical study of CIA demonstrated proteoglycan expression on synovial endothelium at 28 days after the induction of inflammation, with maximum expression detection. Proteoglycan was also expressed weakly on both joint cartilage and synovium in CIA mouse. *Cibortium barometz* appear to protect cartilage from inflammation induced CIA mice. These results support a pathogenic role for promoting joint structure in rheumatoid arthritis and suggest that long term *Cibortium barometz* replacement may help prevent joint damage and disability.

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Result;



Fig. 1. Collagen-induced arthritis and measurement for paw edema.

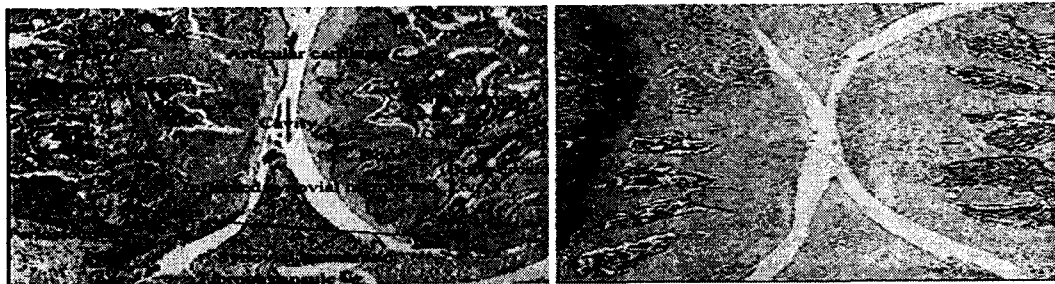


Fig. 2. Histological findings in synovial tissue and articular cartilage: haematoxylin and eosin (HE) staining (left) for chronic inflammation and cartilage damage as well as Safranin O staining (right).

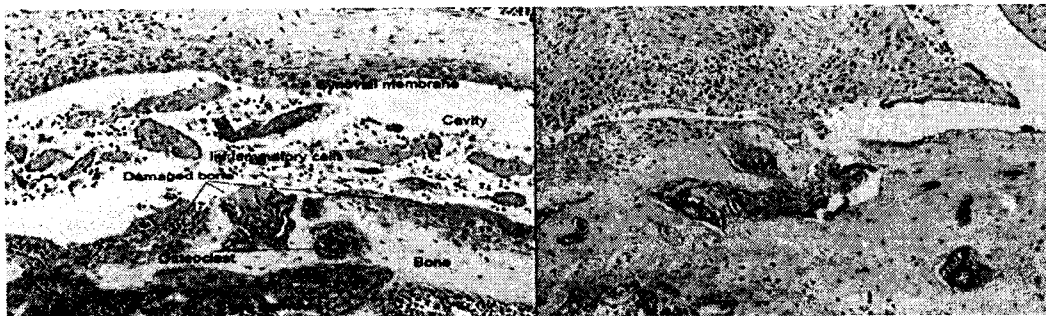


Fig. 3. Effects of *Cibortium barometz*. in the synovium (left and right). Arthritic knee joint of a mouse 28 days after CIA detected with RANK (right). Note the osteoclast expression in the synovium and in cells along the cortical bone(left). Knee joint of a mouse 28 days after CIA showing staining for RANK.