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The effects of Menaquinone 7 on Bone Remodeling Using Biochemical and Histological Analysis (An *in vivo* Study)

ABSTRACT

Objective: To observe the effect of Menaquinone 7 on bone remodeling using biochemical and histological analysis in rabbits as a model.

Materials and methods: Healthy adult male rabbits were selected to use in our study. The animals were split into 2 main groups of six animals for each group (control and vitamin K2 groups).

Results: demonstrated that the Menaquinone 7 administration significant increase in BALP at day 28 (1.0 ± 0.19) in

comparison with control (0.5 ± 0.1) while no significant difference at 14 and 42 days .

whereas NTX level showed no significant increase in at day 14 in control and Menaquinone 7(K2) (4.2 ± 0.1) (4.4 ± 1.0) respectively but at day

30 showed significant increase in NTX in control group (10.3 ± 0.1) in comparison with Menaquinone 7(K2) group

(0.65 ± 0.1) also at day 42 showed significant difference in NTX level in control group (4.1 ± 0.1) in comparison with

Menaquinone 7(K2) group(0.67 ± 0.1). Also a significant increase in osteoid tissue at the three experimental periods

than control group.

Conclusions: This study concluded that Menaquinone 7(K2) increase in bone alkaline concentration level and decrease

in bone resorption marker NTX, in addition to increase in osteoid tissue compare to control group