

Therapeutic Potential of Tualang Honey Formulation in Osteoarthritis: A Comparative Study in New Zealand White Rabbit Models

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INTRODUCTION:

Osteoarthritis (OA) is a prevalent degenerative joint disease with significant global impact. Honey has shown therapeutic potential in treating OA¹. This study aims to evaluate the therapeutic potential of Tualang Honey Formulation (THF) in the management of OA using a New Zealand White Rabbit (NZWR) model, in comparison to the control group.

MATERIALS & METHODS:

A controlled experiment was conducted with sixteen NZWR, surgically induced to develop OA. The experimental group received THF intraarticularly after 3 weeks post-surgery, while control group did not receive any treatment. The rabbits were then euthanized and x-rays were taken at 3, 6, 12, and 24 weeks to evaluate joint space narrowing and subchondral sclerosis as indicators of OA progression.

RESULTS:

Radiographic analysis showed that rabbits treated with THF exhibited less joint space narrowing and subchondral sclerosis compared to the control group. Notable radiological improvements were evident from the 6-week mark, indicating a slower progression of OA.



Figure 1: Lateral view of the rabbits treated with THF at 3, 6, 12 and 24 weeks



Figure 2: Lateral view of the control group at 3, 6, 12 and 24 weeks

DISCUSSIONS:

THF appears to improve the radiographic progression of OA, suggesting its potential as a therapeutic agent². Its effects on subchondral sclerosis and joint space preservation suggest its beneficial effects on joint health.

CONCLUSION:

THF demonstrates radiographic and potential benefits in OA management in NZWR. Further research is warranted to understand its therapeutic mechanisms.

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