GREEN CLOVER POTENTIATES DELAYING THE INCREMENT OF IMBALANCE BONE REMODELING PROCESS IN POSTMENOPAUSAL WOMEN

Abstrak:

Phytoestrogen has selective ability in tissue organs, producing no side effect in breast, uterus and vascular. Green clover (Marsilea crenata Presl) or Semanggi is unique plant in East Java. Using radioimmunoassay, estradiol-like compound concentrations in green clover leaves was detected quite high. The aim was to know whether Green clover have potentiates in delaying the increment of imbalance bone remodeling process in postmenopausal women. Twenty-eight postmenopausal women aged from 49-66 years were examined using pretest-posttest control group design. They were randomized and allocated to 4 groups, control, the group receiving green clover extract, treadmill exercising group, and group receiving green clover as well as treadmill exercising. The estrogen level were measured using solid phase RIA technique, IGF-1 using IRMA, N-Mid osteocalcin (NMid) and C-telopeptide (CTx) using ECLIA. Data were analyzed using descriptive and inferential analyses with comparative and correlation statistical test. A two-tailed p < 0.05 was considered statistically significant. Results showed that geen clover extract administration increased estrogen concentration significantly in postmenopausal women. Combined intervention was more effective to increase estrogen concentration. The combination group also showed significant difference in difference NMid concentration before and after intervention from that of control (p = .003), of semanggi group only (p = .009) and of exercise group only (p = .057). There was no significant changes of CTx in all intervention groups and no significant of changes of IGF-1 level except in exercised group. In conclusion, green clover leaves extract potentiates effects of physical exercise, delaying the increment of imbalance bone remodeling in postmenopausal women.

Keyword:

green clover, postmenopausal women, biochemical marker

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