

THE EFFECT OF QUINCE LEAF (*CYDONIA OBLONGA* MILLER) DECOCTION ON TESTES IN HYPERCHOLESTEROLEMIC RABBITS: A PILOT STUDY

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Abstract

Current medical literature lacks any evidence of the protective effects of quince leaf on testes. Therefore, the aim of the present study was to assess the effect of quince (*Cydonia oblonga* Miller) leaf decoction on testicular injury and impaired spermatogenesis induced by hypercholesterolemia in rabbits. Eleven mature New Zealand white male rabbits were randomly divided into three groups: group 1 (hypercholesterolemia, n=3), group 2 (hypercholesterolemia plus quince treatment, n=6), and group 3 (control, n=2). Groups 1 and 2 received a cholesterol-enriched diet for six weeks. Group 2 received *C. oblonga* leaf decoction as drinking supplement as well. After six weeks, a normal diet was substituted in groups 1 and 2 for another six weeks. Group 3 (control group) was maintained throughout the study on a regular diet. At the end of the 12th week, the left testes of the animals were resected for light microscopic study with particular attention to the maturity of germ cells in seminiferous tubules using Johnsen's score. Increase in intertubular connective tissue and diameter of vessels, abundant spermatogonia and primary spermatocytes along the reduced germinal epithelium were noted in all rabbits of the group 1. The remaining animals in groups 2 and 3 had no significant changes in their testicular sections. The mean Johnsen's score of group 1 (4.20±1.92) was significantly lower than that of group 2 (7.33±0.52) and group 3 (7.05±0.07). (P=0.01). In conclusion, quince leaf decoction (*C. oblonga* Miller) protected rabbit testes and spermatogenesis from damage induced by hypercholesterolemia.

Key words: Hypercholesterolemia; quince; testes; diet