

Histopathological study of *Capparis spinosa* on the healing of experimental Achilles tendon injury in rabbits

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Abstract

The critical role of tendons in body mechanics and injury and degeneration of this tissue can highly be debilitating, resulting in substantial pain, disability and costs. *Capparis spinosa* is one of the most common aromatic plants growing in Iran. The major objective of the study was to assess Achilles tendon healing in a rabbit model by local injection of ethanolic extract of *C. spinosa*. Nine adult white New Zealand male rabbits were anesthetized and partial thickness tenotomies were created on both hindlimbs. The *C. spinosa* extract and normal saline were respectively injected daily to the treatment and control groups for three days post-operatively. Histological analysis on days 7, 14 and 28 post-rupture demonstrated higher regenerating activity and capacity in treated groups than the control group. This was illustrated by fewer inflammatory cells, a larger number of blood vessels, further fibroblasts and increased structural organization with further longitudinally oriented collagen fibers in the treated group. In summary, these results suggest that use of *C. spinosa* extract can promote the healing process of damaged Achilles tendons in rabbits.

Key words: *Capparis spinosa*, Achilles tendon, Rabbit

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