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The possible "chondroprotective" effect of the unsaponifiable constituents of avocado and soya in vivo.

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An experimental in vivo model for studying cartilage destruction has been used to study the possible chondroprotective effect of the unsaponifiable constituents of avocado, soya and their combination at a ratio of 1:2. The method consists of implanting rat articular cartilage wrapped in cotton subcutaneously in mice, treating the animals daily for 2 weeks with the preparations in question, then sacrificing the animals and measuring some biochemical parameters related to cartilage integrity. The chosen parameters involved the glycosaminoglycan and hydroxyproline content of the cartilage, as well as the hydroxyproline content of beta-D-glucosaminidase activity of the granulomatous tissue induced by the cotton covering the cartilage. The unsaponifiables of both avocado and soya significantly reduced the degenerative changes induced by the granuloma tissue on the implanted cartilage in control animals as reflected by the preservation of the glycosaminoglycan and hydroxyproline content, and also reduced the proliferation of hydroxyproline and beta-D-glucosaminidase activity of the granulomatous tissue. The effect was even more marked when animals were treated with the combination of the two unsaponifiables at a 1:2 ratio. The preservation of the cartilage from destruction may have been associated with a diminished release of inflammatory mediators due to the effects of the unsaponifiables. In this context, the results point to a possible "chondroprotective" effect of these agents in vivo. This is in keeping with previous reports of chondroprotection by these unsaponifiables in vitro. The effect of the fixed dose combination in the 1:2 ratio was dose dependent.

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