

A substance isolated from *Cornus officinalis* enhances the motility of human sperm

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摘要

Abstract

The effects of a Chinese herb, *Cornus officinalis*, on the motility of human sperm was studied. An aqueous extract was prepared from the dried fruits of the herb and used in this study. The crude extract at a final concentration of 0.5 microgram/microliter in phosphate buffered saline (pH 7.4) increased sperm motility from 25.8 +/- 7.7% to 42.8 +/- 10.3% (i.e. 68% increase, n = 7), as determined by the computer-aided-sperm-analysis (CASA) method. The crude extract was fractionated by high-performance liquid chromatography (HPLC) into four fractions: C1, C2, C3 and C4. Their effects on sperm motility were further studied by CASA. Only the C4 fraction showed substantial stimulatory effects on sperm motility. At a concentration of 5 ng/microliter, C4 increased the sperm motility from 15.7 +/- 3.8% to 34.5 +/- 6.4% (i.e. 120% increase, n = 6) by CASA and from 14.9 +/- 4.3 to 28.5 +/- 8.1 (i.e. 91% increase, n = 8) by transmembrane migration ratio (TMMR) method. This result suggests that C4 is the active component in *Cornus officinalis* that enhances sperm motility.