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**Sperm immobilization activity of Allium sativum L. and other plant extracts.**

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AIM: To identify possible spermicidal agents through screening a number of edible medicinal plants with antimicrobial activity. METHODS: Initial screening was made on the basis of ram cauda epididymal sperm immobilization immediately after addition of extracts. The most potent extract was selected and was evaluated on both ram and human spermatozoa. To unravel its mode of action several sperm functional tests were carried out, namely viability of cells, hypo-osmotic swelling test for membrane integrity and assays of membrane-bound enzyme 5'-nucleotidase and acrosomal marker enzyme acrosin. RESULTS: The crude aqueous extract of the bulb of Allium sativum L. showed the most promising results by instant immobilization of the ram epididymal sperm at 0.25 g/mL and human ejaculated sperm at 0.5 g/mL. Sperm immobilizing effects were irreversible and the factor of the extract responsible for immobilization was thermostable up to 90 deg. On boiling at 100 deg for 10 minutes, this activity was markedly reduced. Moreover, this extract was able to cause aggregation of ram sperms into small clusters after 30 minutes of incubation at 37 deg. However this property was not found in human spermatozoa. More than 50 % reduction in sperm viability and hypo-osmotic swelling occurred in treated sperm as compared with the controls, indicating the possibility of plasma membrane disintegration which was further supported by the significant reduction in the activity of membrane bound 5'-nucleotidase and acrosomal acrosin. CONCLUSION: The crude aqueous extract of A. sativum bulb possesses spermicidal activity in vitro.

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