

Abstract

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Selenium in human male reproductive organs.

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OBJECTIVE: The objective of the study was to obtain information on the concentration and distribution of selenium throughout the human male reproductive tract.

METHODS: Material was removed at autopsy from 41 men who had died suddenly and unexpectedly. Semen samples were also provided from 184 men attending an andrology clinic for fertility investigation and from 32 healthy volunteers.

RESULTS: Significant positive correlations in the selenium concentration were demonstrated between the different reproductive organs, the testis having the highest concentrations. No correlation was found between the concentration of selenium in the genital organs and liver, kidney or blood, suggesting that its uptake and/or biochemical activity in the reproductive organs may be controlled by similar mechanisms not shared by the other organs. No significant age-dependent changes could be detected in tissue selenium concentrations. In a group of men under fertility investigation, a significant positive correlation was obtained between seminal plasma concentrations of selenium and concentrations of spermatozoa in the same ejaculate.

CONCLUSION: A significant positive correlation between concentrations of zinc and selenium in the same ejaculates indicated that selenium may arise largely from the prostate gland.

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