

Abstract

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A comparative study on interrelations among microelements, infection of *Ureaplasma urealyticum*, and male infertility.

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OBJECTIVE: This study investigated the association among male infertility, infection of *Ureaplasma urealyticum* (Uu), and microelements in semen fluid.

METHODS: Semen analysis and cultivation of Uu are carried out to 165 samples of semen fluid. Then the contents of microelements, such as Cu, Fe, Se, Cd, Mn, and Zn, in the samples are measured respectively by an Inductively Coupled Plasma Quantometer (ICP).

RESULTS: The contents of Fe, Se, and Zn in seminal plasma of the normal spermatic quality group are obviously higher than those of the poor spermatic quality group ($p < .05$), while the content of Cd in seminal plasma of the normal spermatic quality group is obviously lower than that of the poor spermatic quality group ($p < .05$), and the contents of Cu and Mn show no difference. The contents of Zn, Se, and Cu in seminal plasma infected with Uu are markedly lower than those of seminal plasma not infected with Uu ($p < .05$), while the content of Cd in seminal plasma infected with Uu is obviously higher than that in samples not infected with Uu, and the contents of Fe and Mn show no statistic difference. The contents of Zn and Se in seminal plasma of the poor spermatic qualitative semen that were infected with Uu are obviously lower than those of seminal plasma not infected with Uu ($p < .05$), while the content of Cd in seminal plasma of the poor spermatic qualitative semen with Uu infection is markedly higher than that of the normal seminal plasma ($p < .05$).

CONCLUSION: Uu infection leads to the decrease of the contents of Zn and Se in semen fluid, and therefore causes spermatic quality decline. Lack of Fe or overdose of Cd may also contribute to spermatic quality decline.

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