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CARTA AL EDITOR

Ureaplasma urealyticum in the genital tract of infertile men

Ureaplasma urealitycum en el tracto genital de varones infértiles

Ureaplasma urealitycum no trato genital de homens inférteis

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Mr. Editor:

Male infertility is a condition that affects a man's ability to contribute to pregnancy after one year of unprotected intercourse. Internationally, infertility affects between 8-12% of couples and it is estimated that in approximately 40-50% of infertility cases in couples, the male factor is one of the main causes.(1)

Common causes would be: sperm production problems including low sperm count (oligospermia); absence of sperm (azoospermia) or problems with sperm motility and morphology; hormonal disturbances consisting of imbalances in the production of hormones such as testosterone can affect sperm production; as well as lifestyles, such as: smoking, excessive alcohol consumption, drug use, obesity and stress, can affect fertility. (1)

The age of the parents is a crucial factor in the male fertility rate, being optimal between 24 and 25 years of age. After the age of 40, the risk of infertility increases due to decreased sperm quality. With age, spermatozoa tend to lose efficiency in fertilization and aging affects the seminal vesicles, reducing semen volume and motility.

Studies have shown that the majority of patients with fertility problems are in the 25 to 29 years age range, which coincides with previous research that also highlights the negative influence of age on fertility.[2]

In Cuba, it is estimated that some 300,000 couples require attention for infertility, with an incidence between 12% and 15% of the population. Thirty percent of the cases are due to male causes. Some infections, acquired through unprotected sexual intercourse, can affect sperm production or cause scars that block their passage. Ureaplasma urealyticum is the most common pathogen in genitourinary infections, present in 42.9% of cases, followed by Mycoplasma and Chlamydia trachomatis, which also affect male fertility.[3]

Ureaplasma urealyticum infection in the male genital tract is an important risk factor for male infertility. Symptoms of this infection include: pain and discomfort in the perineum, enlarged testes, frequent and difficult urination, burning sensation in the urethra during urination, and mucous discharge from the urethra.[5]

A study in China showed that such infection negatively affects semen quality, including pH value, liquefaction time, sperm concentration and sperm motility.[6] The study data indicated that Ureaplasma urealyticum infection was common in young men (30.83%), a higher percentage than in other studies, possibly due to differences in detection methods or regional differences. After infection, a significant reduction in sperm number, concentration, activity and survival rate was observed. Infection directly affects the sperm-oocyte combination, interfering with sperm maturation in the convoluted tubules.

Mixed infections had a more significant effect on semen parameters than other pathogens, increasing the number of non-advanced motile spermatozoa. Ureaplasma urealyticum infection can adhere to spermatozoa, affecting their vitality, motility, morphology, cellular integrity and molecular structure. This is due to the development of protective immunity against genital infection.[6]

Compared with pathogen-free semen samples, infection with Ureaplasma urealyticum significantly increases the rate of sperm malformation. When the proportion of normal sperm is less than 4%, the probability of pregnancy is reduced. The infection affects sperm morphology, which damages the membrane at the absorption site and causes deformities such as large, double and tailless heads. In addition, it can stimulate the production of inflammatory mediators that damage sperm morphology.[6]

Therefore, it is essential to address modifiable risk factors such as improving lifestyle and treating genitourinary infections to improve male fertility. Men are advised to maintain regular medical control, avoid unhealthy habits and treat infections early to preserve sperm quality.

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