

Research Letter

Ureaplasma Urealyticum as a Possible Hidden Cause of Couple Infertility

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RESEARCH LETTER

Dear Editor,

Currently an high percentage of Oligoasthenoteratozoospermia (OAT) is deemed to be responsible for over 50% of cases of infertility in couples.¹ A large percentage of sexually transmitted disease caused by intracellular germs seems to have a significant influence on couple fertility and in the outcome of In Vitro Fertilization Treatment (IVF).² In particular, we considered the Ureaplasma Urealyticum (UU) infections. Less clear is their influence on male infertility alone. Several studies reported that UU is present in an high percentage of fertile men, despite being sometimes the likely cause of significant reductions in sperm count number, sperm mobility and morphology.³⁻⁵

Is it the permanent reduction in male fertility in subjects already treated for UU infection a result of a not completely or only apparently cured infection? From December 2010 to June 2020 we conducted an experimental non randomized not controlled study on 164 couples with idiopathic infertility lasting for at least three years, where the male partner was affected by OAT and where at one least cultural test was in the past positive for UU, treated by conventional antibiotic protocols.³ All couples were tested and negative for urogenital infections at the study enrollement. The couples had been through between 2 and 10 IVF with negative results and 62 women (37,8%) had spontaneous abortions before the 12th week. After enrollement and general evaluation, both partners were treated with 100 mg Doxycycline (15 consecutive days a month for two months), 500mg Azythromicin (3 days every 10 days for 2 months), 400mg Moxifloxacin (7 days consecutive every months for two months). Couples were asked not to have sex during the first month of therapy and then resumed fertilizing intercourses. Semen analyses were performed at the end of the first month of therapy and at the third months from therapy start. Statistical analyses comparing seminal parameters before and after treatment were carried out (Student's T-test and Wilconxon test depending on the nature of the data). The following seminal parameters were observed: semen volume, pH, viscosity,

fluidity, sperm concentration, progressive sperm motility, rapid sperm motility, agglutinations, leukospermia.

Male average age was 36.6 years. Female average age 33,8 years. In the 64% of couples we retrieved irritative genital symptoms (20% males, 34% females, 10% both). In 130 females (79,2%) and 61 males (37,2%) was previously diagnosed an UU infection. An improvement in the seminal parameters was observed in 70% (60/164); 21% (35/164) showed no significant change; 8% (13/164) showed a worsening of seminal parameters at one month test and a slight improvement at the three month test. The therapy was generally well tolerated with only 7 dropouts (5 female and 2 men). For all parameters analyzed, the statistical tests were significant with a p-value <0.001. Symptoms improved in 96% of cases. The total pregnancy rate was 44,5% (73/164) with 51 females aged less than 37 years and 22 older than 37. Pregnancies were natural in 20,7% of cases (34/164). The time interval between the end of the therapy and the pregnancy inception ranged from 1 to 12 months with an average of 3,5 months. We believe that the combined administration of Doxycycline, Azythromicin and Moxifloxacin improves sperm quality and result in increased pregnancy rates, with or without additional IVF treatments, in previously treated UU genital infections that have been only partially cured, as evidenced by the improvement in the seminal parameters.

Keywords: Couple infertility, Oligoasthenospermia, Therapy, Ureaplasma urealyticum

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