

Semen Analysis and In Vitro Fertilization Cycle Outcome in Polyzoospermia

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Abstract

Introduction: According to the World Health Organization (WHO) criteria, men with sperm counts more than $250 \times 10^6 / ml$ are referred to as polyzoospermics. Some studies suggest that these individuals might have reduced sperm motility and infertility. Therefore, the aims of this study were to assess macroscopic as well as microscopic parameters of semen samples and outcomes of in vitro fertilization (IVF) or intracytoplasmic sperm injection (ICSI) in men with polyzoospermia.

Materials and Methods: Participants of this retrospective study were 121 polyzoospermic men referring to Yazd Infertility Center, from September 2003 to June 2007. The macroscopic and microscopic parameters of semen samples were evaluated regarding the WHO guideline in 94 of the cases (Group I). The remaining 27 cases (Group II) with polyzoospermia underwent IVF or ICSI. The data on the clinical conditions of cases in group II, including sperm parameters, quality and number of ova, quality of the developed embryos, fertility and pregnancy rates were collected.

Results: Results of semen analyses in the two groups were within normal ranges according to WHO guidelines. The mean values for sperm progressive motility (Rapid and slow) were $15.05\% \pm 15.56$ and $39.67\% \pm 15.45$ in group I and $16.37\% \pm 16.51$ and $14.92\% \pm 35.66$ in group II, respectively. Out of 234 retrieved oocytes, 144 oocytes were fertilized (61.5%) and 112 embryos were developed (77.7%), which from these only 73 embryos were transferred (65.1%). Out of 27 cases undergoing ICSI, 22 failed to conceive but five succeeded (18.5%). The infertility etiologies were related to female, male and unexplained causes in five, eight and 14 cases respectively. Of the five pregnant cases, three were conceived with sperm morphologies less than 30%.

Conclusion: According to the results, men with polyzoospermia have semen parameters within normal ranges. It seems that excessive sperm concentration (Polyzoospermia) has no significant effects on the likelihood of fertilization and pregnancy rates in assisted reproductive technique (ART) cycles.

Keywords: Embryo transfer, In vitro fertilization, Infertility, Male infertility, Oocyte, Polyzoospermia, Semen analysis, Sperm.

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Received: Feb 24, 2008; Accepted: Nov 21, 2008