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Incidence and distribution of antisperm antibodies (ASA) in male and female subjects undergoing subfertility treatment at a selected centre.

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The presence of naturally occurring antibodies against antigens in the gametes can reduce fecundity in both males and females. In subfertile males, Antisperm antibodies (ASA) may be detected on the surface of spermatozoa, seminal plasma and serum and in females it may be detected in cervical mucus, serum and follicular fluid. However, after decades of study, the relationship between the presence of ASA and infertility continues to be disputed. In Sri-Lanka data relating to the incidence of ASA and its effect to subfertility is scarce.

In this present study we have investigated the presence of ASA using SpermMar immunobead test in subfertile males and females who seek treatment at 'Prarthana', Centre for ART, Nawala, during 01.01.2006 – 31.12.2006. ASA IgA and IgG is checked on the surface of spermatozoa, in seminal plasma and in serum of male subjects and in cervical mucus, serum and follicular fluid –FF (undergoing In Vitro Fertilization) of female subjects. FF taken without flushing of follicles.

Eleven out of 55 (20%) male subfertile subjects and 05 out of 55 (9.09%) female subfertile subjects had significantly positive ASA level. Total positive number is taken if at least one sample is positive for either IgA or IgG. In positive males 10 out of 11(90.9%) showed ASA either on spermatozoa or seminal plasma or in both. Only one (9.09%) serum sample was positive for ASA. In positive females 3 out of 5 (60%) showed ASA in cervical mucus and 2 (40%) had ASA in both serum and FF.

It has been demonstrated that ASA in female can impair sperm migration in the female genital tract particularly in cervical mucus and uterine cavity through fallopian tubes and also it is reported that inhibitory effects on fertilization and post fertilization events. ASA in males has a negative effect on the spermatozoa motility in the semen, on their ability to pass through female genital secretions etc. One method available at present to overcome the potentially deleterious effects of ASA-mediated subfertility includes Assisted Reproductive Technologies. In this study we observed the incidence of ASA is as high as 20% in subfertile males and 9% in subfertile females. And also ASA are mostly detected in semen in males and in cervical mucus in females. Therefore, we conclude that it is important to screen subfertile couples for ASA as a routine test to direct them to proper treatment modalities. This study will also provide basic ASA prevalence figures for any future references.

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