

Detection of Antisperm Antibodies in Sera of Iraqi Males and Females and Their Role in Fertilizing Capacity

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Abstract

Background: Antisperm antibodies (ASAs) have a main role in the immunological infertility. Antisperm antibodies negatively affect sperm movement and interfere with fertilization and may cause abortion .

Objective: to Investigate the occurrence of antisperm antibodies in sera of men and women and their role in fertilizing capacity.

Method: Sixty men and thirteen women were involved in this study . Indirect immunofluorescent test kit was used . As a counterstain , Evans blue pigment was used . The fluorescent microscope was used . For sixty males, seminal fluid analyses were

performed. For thirteen females, direct microscopic vaginal tests were done.

Results: Forty five men (75%) and ten women (76.9%) showed positive reactions and antibody titres were either 1/10 or 1/32 .

Conclusions: Serum antisperm antibodies play a significant role in autoimmune infertility and should be treated.

Keywords: serum, antisperm antibodies, infertility, immunity.

IRAQI J MED SCI, 2009; VOL.7 (3):19-23

Introduction

Antisperm antibodies can be defined as immunoglobulins of the IgG, IgA and / or IgM isotype that is directed to various parts of the spermatozoa (head, tail, midpiece or combination thereof)⁽¹⁾. Antisperm antibodies can be detected in seminal fluid, cervical mucus, oviductal fluid or follicular fluid of women and blood serum of men and women ⁽²⁾. The occurrence of antisperm antibodies give rise to immunological infertility ⁽³⁾. In males, testicular trauma, infection, cancer, cryptorchidism and varicocele are involved in generation of antisperm antibodies ⁽¹⁾.

In females, the contributing factors include: mechanical such as uterine cervix surgery or chemical disruption of the mucosal layer of the genital tract, foreign antigens gaining access to the female genital tract,

lymphocytes in semen , sperm with surface bound antibodies abnormal, senescent or damage sperm, gastrointestinal exposure to sperm and sperm within the peritoneal cavity after transtubal passage⁽¹⁾.

The possible effects of immunologic reaction to fertility are disordered spermatogenesis, inhibiting the effective transport of spermatozoa in male reproductive tract, autoagglutination of ejaculated spermatozoa, sperm cytotoxicity, immobilizing of sperm in the female tract, enhancement of phagocytic clearance of spermatozoa by macrophages, inadequate spermatozoal traverse of cervical mucus, disordered acrosome reaction, blockage of sperm-ovum interaction, induction of sperm immunity in the female, and postfertilization reproductive failure and occult abortion^(1,2,4). Therefore, this study is designed to detect sASAs in both infertile men and women , their causes and role in immunological infertility .

Materials and Methods

Seventy-three infertile patients [sixty males (82.2%) and thirteen

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Received: 26th April 2009, Accepted: 15th July 2009.