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The age old problem of the barren marriage has always engaged the interest of the physician. However with the advance of civilization it has become more than eternal medical problem, a problem which closely affects the welfare of the society because reproduction is an essential aspect of marriage.

The desire for children by the normal woman is stronger than self-interest in beauty and figure, stronger than the claims of career, in the male it is less intense. Childlessness is generally a tragedy to the married women, and can be a cause of marital upset as well as of personal unhappiness and ill health. Moreover sterility ranks high among the causes of deep unhappiness in marriages because childless union lacks the strong cementing desire for the common good of the family.

Since time immemorial, the wife has always been blamed for infertility and because of psychological upbearing in our society, the woman usually assumes the responsibility for failure to produce a child.
Failure to find sperms in coital test by Huhner in 1913 raised the possibility that the husband could also be responsible for infertility. Since then, the available statistics from various infertility clinics show that the husband is responsible for infertility, totally or partially, in 40-50 percent of infertile couples. This realisation also gives an idea of the magnitude of the problem.

So it is important to remember that infertility is a disorder of complex nature where both the partners are equally responsible.

Unexplained failure in infertile cases, with absence of any evidence of pathology, left the clinician in a blind alley. Hence researches were done in this aspect of field, to evaluate the cause for infertility and to provide comprehensive management with better results.

At the turn of this century, it was observed that spermatozoa from one animal species may provoke an immune reaction not only in heterologous species, but also in male or female of the same species. (Landsteiner, 1899; Netchnikoff, 1900). Antibodies demonstrated in such experiments are termed hetero-auto and iso antibodies respectively (Voisin et al. 1974).
Over a past eighty years a considerable amount of data has accumulated from extensive investigations in reproductive immunology. The margin ventures in this field have been to disclose the immunological reactions as a cause of infertility and conversely to investigate the possibility of active fertility regulation by inducing immune reactions against reproductive antigens i.e. the development of contraceptive vaccine. These objectives have been approached by investigating the association between infertility and spontaneously developed immune reactions against antigens in the male or female reproductive tract "Nature's own experiments" - and secondly by experimental studies on the effect on fertility of active immunization with such antigens.

Immunization of female animals with spermatozoa or testes from homologous males has resulted in significant reduction of fertility in an extensive number of investigations (Katzer, 1959; Tyler, 1961; Hange, 1970; Behrman, 1975). Today such experiments seem to be rather primitive and unethical, since immunization with crude spermatozoa material implies an obvious risk of developing
immunological disease as a cross-reacting antibodies, immune-complex and allergic reaction (Tung, 1976).

Therefore in human reproductive immunology, new knowledge has been gained by studying "spontaneously" developed immune reaction against reproductive antigens.

Exposure to foreign antigens may lead to one or several type of immune reactions which are classified as follows: (i) Anaphylactic, (ii) cytotoxic, (iii) complex-mediated, (iv) cell mediated, (iv) stimulatory hypersensitivity.

The investigation of immune reactions in women against sperm antigens have concentrated mainly on type II reactions. These reactions appear to be due to IgE antibodies directed against a non-spermatozoa glycoprotein in seminal plasma.

A cytotoxic immune reaction against spermatozoa was first observed in women by Meaker in 1922. He found sperm agglutination and immobilizing activity in serum from a woman from couples with so-called unexplained infertility. However, it was not until 1964 that more extensive investigation appeared on the occurrence of sperm antibodies in
fertile and infertile women. In these initial studies, Franklin-Dukes (1964 a, b) using a micro-agglutination technique, observed frequently in women from couples with unexplained infertility.

In systemically immunized experimental animals, sperm antibodies have been demonstrated in all segments of the female genital tract, i.e. the vagina, cervix, uterus, fallopian tube and in the follicular fluid (By Menge, 1970; Kille & Goldberg, 1979).

Increased phagocytosis of spermatozoa in uterus (Sokolovskaya & Reshetnikova, 1969), the fertility reducing effect of sperm antibodies in immunized female has been ascribed to inhibited penetration of spermatozoa in the genital tract (Metz & Amnika, 1970; Menge, 1971 a), inhibited fertilization of the ovum (Menge, 1970; Menge, 1971 b; Metz et al, 1972; Munoz & Metz, 1978) and early embryo mortality (Menge, 1968, 1969 a, 1970 & Menge et al, 1974).

These animal experiments have therefore not only demonstrated that iso-immunization with spermatozoa may reduce fertility, but have also indicated some of the possible mechanism behind this effect.
Despite the fact that spermatozoa were demonstrated as antigenic over 90 years ago, controversy still concerning what effect, if any, sperm antibodies have on fertility.

In view of this the present study was undertaken with aims -

1. To evaluate the incidence of sperm agglutinating antibodies in serum of women having unexplained infertility.

2. To evaluate the incidence of sperm agglutinating antibodies in cervical mucus of women having unexplained infertility.

3. To compare the significance of sperm agglutinating antibodies in serum and cervical mucus in women having unexplained infertility.