Evaluation of Infertility Management In Ain Shams Maternity Hospital

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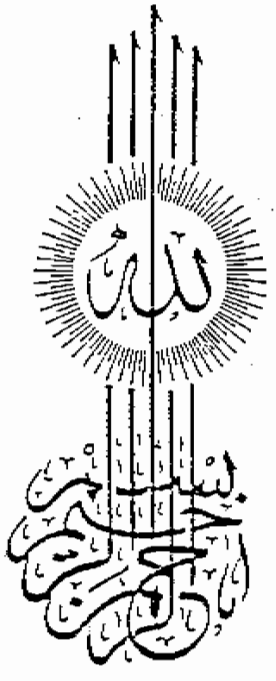

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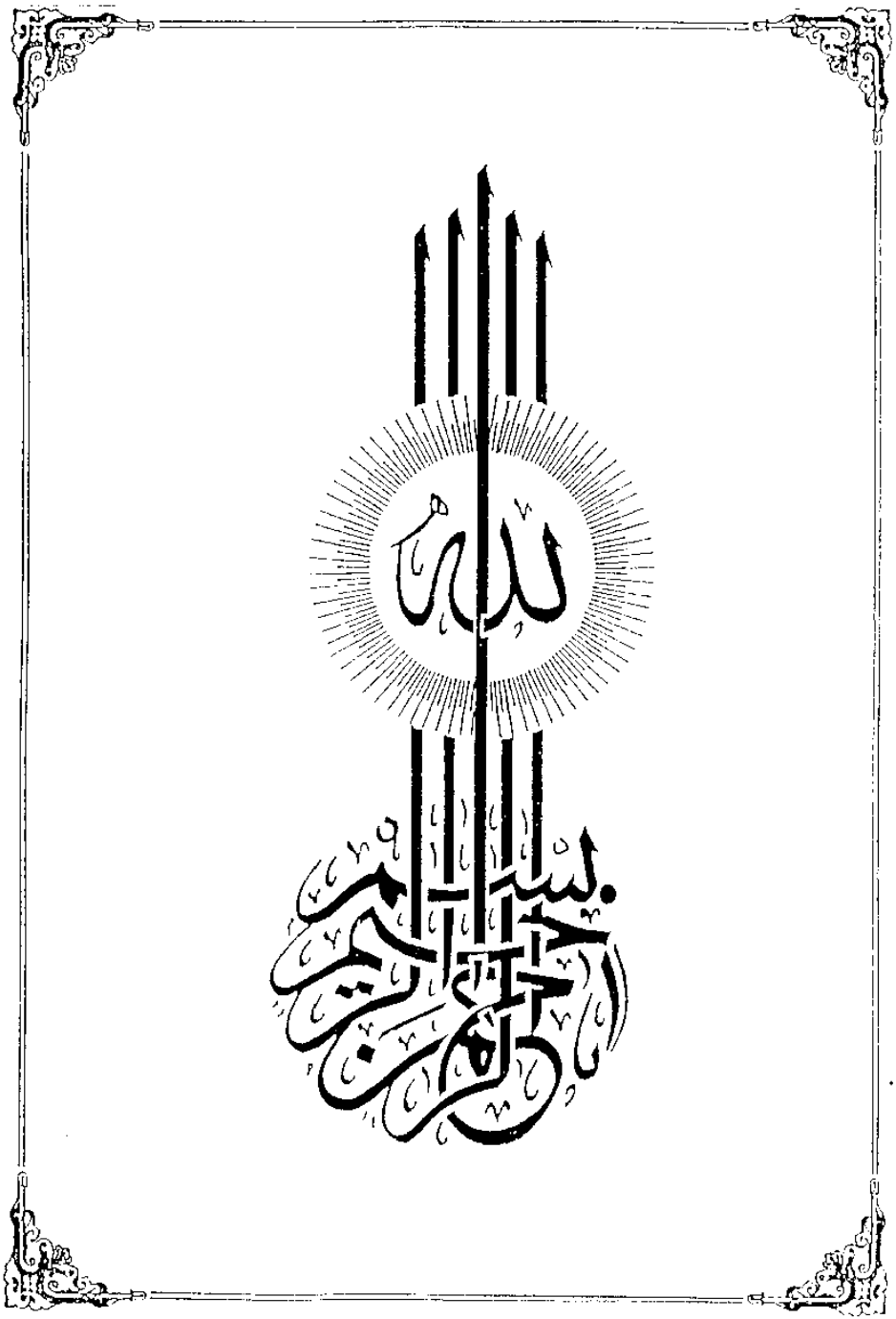

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INTRODUCTION

Infertility is a problem that affects men and women everywhere in the world. Although estimates of its prevalence are not very accurate and vary from region to region, about 8% of couples experience some form of infertility problem during their reproductive lives (WHO, 1993). It is estimated that, there are about 2 million new infertile couples per year (Rowe, 1988). Infertility today is a health problem with an important economic component. In the United States, it has been estimated that the total annual cost of infertility treatment is approximately $ 1 billion (Sciarra, 1988).

For couples of reproductive age who are having unprotected intercourse, infertility is defined as the inability to establish a pregnancy within a specific period of time, usually 1 year (Sciarra, 1994). Medically, infertility is a condition in which two individuals must be considered. As the husband, or the wife or both, may have factors contributing to the condition, a cooperative investigation is necessary (Novak & Woodruff, 1979).

Numerous factors may be responsible for infertility. Conception and pregnancy depends on complex physiological, anatomic and immunological factors. The male needs normal spermatogenesis, reproductive anatomy and sexual function to deposit an adequate number of morphologically normal, motile spermatozoa in the upper vagina.

The female needs a functionally intact hypothalamic - pituitary - ovarian axis to regulate the menstrual cycle and provide normal folliculogenesis, ovulation, and luteal phase hormonal milieu. For the ovum and spermatozoa to meet in the fallopian tube, the spermatozoa must initially penetrate periovulatory cervical mucus and the fallopian tube must be adquately mobile and functional to pick-up and transport the ovum. Once fertilization has occurred the pre-embryo is transferred to the uterus where successful implantation depends on a hormonally stimulated endometrium maintained by a functional corpus luteum . A disruption in any aspect of these processes can result in infertility (Jaffe. & Jewelewiz, 1991).

Aim Of The Work

Tuberculosis may cause epididymitis and prostatitis associated with impairment of sperm transport (WHO, 1993). Chronic respiratory tract disease includes bronchiectasis, chronic sinusitis and chronic bronchitis are sometimes associated with disorders of sperm motility such as immotile cilia syndrome (Eliasson et al 1977), or with secretory disturbance in the epididymis such as in Young's syndrome (Handelsman et al, 1984). The latter problem may also occure in men with fibrocystic disease of the pancreas, these men also have an increased incidence of dysgensis or absence of the vas deferens (Kaplan et al, 1968).

Postpubertal orchitis associated with infectious parotitis (mumps) is recorded as a possible cause of acquired testicular damage (WHO, 1993). Other non-genital diseases related to the infertility e.g. renal failure and hepatic diseases should be recorded (WHO, 1993).

Childhood and pubertal development

prenatal exposure to diethylstilboestrol may cause epididymal malformation, undescended testes and oligospermia. Epispadius, hypospadius, urethral valves, inguinal hernias, hydroceles, major urogenital malformations and their surgical treatment may impair fertility (Baker & Keogh, 1994).

Delayed or incomplete pubertal development may alert to a diagnosis of Kallman's syndrome with its asso-

ciated infertility due to hypogonadotropic hypogonadism, or other hypothalamic and /or pituitary disorders. Conversely, accelerated puberty culminating in short stature suggests congenital adrenal hyperplasia (Lipshultz & Witt, 1992).

Males born with unilaterally or bilaterally undescended testes may have semen of poor quality (Kogan, 1985). Testicular torsion should be noted as both may result in an atrophic testes (Baker & Keogh, 1994).

Iatrogenic

Pelvic and inguinal surgery may compromise the blood supply of the vasa or testes. Renal transplantation, hydrocele, epididymal cyst or varicocele surgery may reduce fertility. Chemotherapy and x-ray therapy for testicular tumours, leukaemias or lymphomas deplete the germinal epithelium which is an irreversible effect (Baker & Keogh, 1994).

Sulphasalazine (Wu et al, 1989) used for ulcerative colitis induces reversible reduction of spermatogenesis. Athletes who use enormous doses of androgens and anabolic agents may have a return to normal fertility once they stop the drugs. Less commonly, estrogen, glucocorticoids, cimetidine, spironolactone, nitrofurantoin, hypotensive agents and psychotropic drugs in large doses may cause infertility (Baker & Keogh, 1994).

General health and environmental toxins

Any illness can reduce sperm production and libido. Fever, irrespective of cause may reduce sperm output for several months as the entire spermatogenic process takes approximately three months (Lipshultz & Witt, 1992).

Exposure to pesticides e.g. dibromochloropropane may interfere with spermatogensis either directly or through alteration in the endocrine system (Lipshultz et al 1980). Excessive use of alcohol, marijuana and tobaco reduce sperm quality (Klaiber et al 1987).

Sexual history

A detailed sexual history must be obtained. The partner should know the optimal time for intercourse, as sperm survival in normal cervical mucus and within the cervical crypts is approximately two days, so, effective frequency of intercourse is every 48 hours around the ovulatory peak (Lipshultz & Witt, 1992). A history of erectile dysfunction or premature or difficult ejaculation should also be noted. Sexual history may reveal that the couple avoid coitus during the fertile period because of ovulatory pain or using vaginal lubricants which interfere with sperm motility (Sherins & Howards, 1986).

Physical examination

Physical examination should be through with emphasis placed on the genitalia. Hight, weight, blood pres-

sure, distribution of body hair, unusal length of extremities and general nutritional status are noted. A test for anosmia is important in patients with hypogonadism in order to rule out Kallman's syndrome. If hyperprolactinemia is present a space occupying lesion in the sella turcica should be ruled out. Patients should be checked neurologically. The thyroid gland is carefully palpated and the breasts are carefully examined for gynecomastia. Abdominal palpation may reveal liver enlargement. Operative scars in the inguinogenital areas are noted (Glezerman & Lunenfeld, 1993).

Penile curvature or the presence of tunical plaques should be assessed as well as the position of the urethral meatus. These structural abnormalities can results in improper placement of the ejaculate within the vaginal vault. The scrotal contents should be palpated with the patient in the upright position. Testicular size and consistency must be noted, and the length and width of the testes measured to the nearest millimeter or the volume of the testis estimated with an orchidometer. Decreased testis size or volume is often associated witrh impaired spermatogenesis (Lipshultz & Corriere, 1977). This is not surprising, since 85% of the testis is involved in sperm production, consequently when the germinal epithelium atrophies, loss of testicular mass occurs.