Chapter 1

MALE REPRODUCTIVE SYSTEM AND INFERTILITY: A COMMON RELATIONSHIP

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Introduction

Infertility is a condition with psychological, economic, medical implications resulting in trauma, stress, particularly in a social event. Infertility male factor can be related to female factor or a combination of both.This chapter explaines the importance of male factor infertility in the reproductive system. Males with sperm parameters below the world health organization normal range parameters are reflect on male factor infertility. Male factor, multifaceted problem, is responsible for 40-50 % of infertility cases. Infertility is a disease defined by the failure of a couple to achieve a successful pregnancy within one year or a period. Furthermore, infertility happens when a couple cannot conceive after having regular unprotected sex. Infertility is a widely spreading pandemic worldwide concern. Current evidence suggests that approximately 15 % of all couples of reproductive age are infertile and in up to 50 % of infertile couples undergoing in vitro fertilization. Especially impairments in the process of spermatogenesis and sperm function principally contributes to infertility called male factor infertility (Hajizadeh Maleki & Tartibian, 2018; Kumar & Singh, 2018).

The main functions of the male reproductive system, are to produce spermatozoa, androgens (sex hormones - principally testosterone) and to facilitate fertilisation, by introducing spermatozoa. The male reproductive system consists of testes, genital ducts, accessory glands and penis. The task of the testis is to produce hormones and spermatozoa. Both testosterone and metabolite dihydrotestosterone are required for male physiology, with testosterone being the major hormone produced in the testis. Genital ducts and accessory glands produce secretions that send spermatozoa out with the help of smooth muscle contractions. These secretions also provide the necessary nutrients to the spermatozoa in the male reproductive system. The secretion of genital ducts and accessory glands with spermatozoa constitutes the semen transmitted to the female reproductive system via the penis and ejaculation process (Hejmej &Bilinska, 2018).

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