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Dual Infection with Trichomonas Vaginalis and Neisseria Gonorrhea in a Male with Infertility:

A case report.

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Abstract
Trichomoniasis is the most common curable sexually transmitted disease, caused by Trichomonas vaginalis, or Trichomonad. It is a pear-shaped organism that propels itself with four whip-like flagella that protrude from its front end (1). The men usually; only get it from infected women (2). In the present study, a male nomad from Upper Nile State, a sexual transmitted diseases area in Southern Sudan was admitted to the Reproductive Health Care Center (RHCC) in Khartoum, Sudan. The patient complains of history of infertility for five years and uncomfortable sexual intercourse. On palpation of the external genitalia, epididymitis was evident as indicated by the enlargement of the head of the epididymis. Semen analysis showed that the semen was turbid, infiltrated with inflammatory cells, and erythrocytes. His semen showed azoospermia. Hence; the patient was diagnosed with infertility due to azoospermia. In addition, numerous active trophozoits of Trichomonas vaginalis were demonstrated in the semen sample, as well as Neisseria gonorrhoea in direct Gram stained smear of semen sample (3). This study suggested that Trichomonas vaginalis should be considered accompanied with gonococcal (GC) infections, as a cause of male infertility, in sexually transmitted diseases epidemic areas. Giving the fact that N.gonorrhoeae was not intracellularly killed by phagocytosis by T. vaginalis (4). On the other hand dual infection with T.vaginalis and N.gonorrhoeae in the man could be the main cause of azoospermia.

Key words: Trichomonas vaginalis, Neisseria gonorrhea, male infertility semen evaluation, azoospermia, Sudan.

Introduction
Trichomoniasis is caused by a single-celled parasite called Trichomonas vaginalis. It is a microscopic parasite found worldwide. According to the World Health Organization, in Africa, trichomoniasis affects around 170
million people each year (5). The vast majority of cases of trichomoniasis were acquired through sexual contact or by toilet seats. The infection is primarily of the urogenital tract (6).

The vagina is the most common infected place in women, and the urethra is the most common infected place in men (2). Two other species of trichomonads infect humans are T. tenax and T. hominis. There is some debate about the role of these species may play in urogenital infection. It is believed that trichomonads attach themselves to tissue with their axostyles, and this causes some of the irritation and inflammation associated with a trichomoniasis infection (7).

T. vaginalis is anaerobic, and it grows best in oxygen-free, low acidity environments its metabolism energy bears a stronger resemblance to that of anaerobic bacteria (2). Maximum growth and metabolic function of the parasite is achieved at a pH of 6.0 and multiply via binary fission. T.vaginalis may be a cause of male infertility (reduces the motility and count of sperm cells) (8). Asymptomatic trichomoniasis may spread rapidly. So it is important to diagnose and treat the infection appropriately (9). The high incidence of T.vaginalis infection worldwide and co-infection with other sexually transmitted infections like N.gonorrhoeae make trichomoniasis a compelling public health concern (10). Trichomonads may serve as vectors for spread of other organisms by carrying these pathogens up to various tissues (5), one of them is N. gonorrheae which is gram negative, intracellular, aerobic diplococci. It mainly affects the mucous membranes of the urethra in males and the endocervix and urethra in females; it is the causative agent of gonorrhoea and is also transmitted via sexual contact (3). Gonorrhea is much higher in African than in other racial groups. It is the most common in young men, and can be asymptomatic (4). Although rarely cause epididymal orchitis, but it can cause testicular damage or block the vas deferens. Also gonorrhea can be adsorbed on the human sperm, and affect its function, so it plays a role in infertility in men (11).

References


