INTRODUCTION

Infertility, defined as one year of unprotected intercourse without conception, is an important public health problem. Infertility due to tubal disease affects 10% to 20% of North American couples ***(Kosseim and Brunham, 1986)***.

The most, common disease that alters the anatomic integrity of the tube is salpingitis ***(Ruijs et al.,1991)***.

Epidemiologic studies in the last two decades have demonstrated rising rates of sexually transmitted diseases associated with a secondary epidemic of pelvic inflammatory disease, resulting in a tertiary epidemic of tubal occlusion, infertility and ectopic pregnancy ***(Sweet and Gibbs, 1985; Kosseim and Brunham,1986).***

Neisseria gonorrhea and chlamydia trachomatis are the two organisms most frequently related to upper genital tract infection in the United States ***(Barnes, 1989; Cates et al., 1990)***. Genital chlamydial infections are estimated to occur at a rate two times that of N. gonorrhea infections ***(Cates et al., 1990)***.

The sequence of sexually transmitted diseases (STD) to salpingitis and then to infertility appears common but not predictable. Asymptomatic pelvic infection has been reported, especially with chlamydia trachomatis. Evidence for this is the presence of tubal disease on laparoscopy in women with no history of an acute pelvic inflammatory disease (PID) ***(Ruijs et al., 1991)***. So, the diagnosis of tubal disease can not rely solely

on the presence or absence of a history of PID. Commonly used methods of diagnostic testing for tubal disease are hysterosalpingoraphy (HSG) and laparoscopy. Hysterosalpingography has been used in the evaluation of infertility to demonstrate tubal patency, myometra, and uterine anomalies for more than 70 years ***(Siegler, 1983)***.

Hysterosalpingography has been a routine in may infertility centers as a preliminary investigation tool because it is less costy and less invasive than laparoscopy. Although laparoscopy is considered the gold standard for evaluation of tubal disease, it is invasive and costy. Non-invasive methods that yield comparable diagnostic results, would be useful in a cost contained system.

Laboratory tests such as enzyme-linked immunosorbant assays (ELISA) and indirect fluorescent antibody (IFA) testing have been proposed as alternative methods of testing for tubal disease. Micro immunofluorescence (MIF) has been considered the most reliable test for detecting past exposure to chlamydia trachomatis but is not commerically available ***(Barnes,1989)***.

The goal of this research was to compare the diagnostic utility of two less expensive, less invasive tests, chalmydia trachomatis antibody titer assay and HSG, either alone or in combination, to laparoscopy for prediction of tubal disease. Our hypothesis was that chlamydia trachomatis antibody testing either alone or in combination with HSG would predict tubal disease absence so that laparoscopic testing would not be required in patient without tubal disease. Such patient could then proceed with a medically managed treatment plan.