Introduction

Endometriosis is a chronic and recurrent disease characterized by the presence and proliferation of functional endometrial glands and stroma outside the uterine cavity ***(Valle et al., 2003)***. It is estimated that 10 to 15% of women of reproductive age suffer from this disease ***(Crammer et al., 2002)***.

Although endometriosis is seen primarily among women of reproductive age, this disease also can affect post-menopausal women and adolescents especially adolescents with uterine abnormalities ***(Valle et al., 2003)***. In particular, endometriosis is more common in women with Mullerian anomalies resulting in outflow obstruction (increasing retrograde menstrual flow) ***(Olive et al., 1987)***, as well as in women with prolonged menstruation and shorter cycles (27 days or less) ***(Berube et al., 1998)***. These observations are consistent with the widely accepted 'theory that retrograde menstruation is a key component in the development of endometriosis. The importance of retrograde menstruation is supported also by the distribution of endometriotic lesions in the abdominal cavity and the viability in tissue culture of endometrial cells shed during menstruation. However, retrograde menstruation can be observed in up to 90% of women, suggesting the involvement of additional factors in the implantation and growth of endometriotic lesions in women who go on to develop the disease ***(Gazvani et al., 2002)***.

Endometriosis is one of the commonest benign gynecological conditions between 17 and 44% of patients with endometriosis have ovarian endometriosis ***(Redwine, 1999)***, and gynecologists are frequently confronted with the problems of managing these patients. Among the different therapeutic modalities, it is well know that medical treatment alone is inadequate ***(Farquhar and Sutton, 1998; Jones and Sutton, 2000)***, and conservative medical treatment, independently of

the prescribed product, may lead simply to a reduction in volume rather than complete regression of the endometriotic cyst ***(Dmowski et al., 1989; Donnez et al., 1989; Rana et al., 1996)***. The failure of such conservative medical management is due to the persistence of Endometriotic tissue during treatment ***(Donnez et al., 1989)***.

There are three main goals in the treatment of endometriosis: pain relief, resolution of endometriotic deposits, and restoration of fertility, when wanted. In addition, which of several medical and surgical approaches is used is dictated by the patients age severity of symptoms, stage of disease, and previous response to treatment if any ***(Show, 1997)***.

In most patients, confirmatory laparoscopy is required before treatment is instituted.

In most women with endometriosis, preservation of reproductive function is desirable. Therefore, the least invasive and least expensive approach that is effective should be used ***(Novak,1996)***. Surgical treatment is the preferred approach to infertile patients with advanced endometriosis.

Laparoscopic surgery is currently considered the treatment of choice in women with benign ovarian cysts and has gained increasing acceptance among gynecological surgeons ***(Daniell et al.,1991; Donnez et al., 1996; Sutton et al., 1997 and Canis et al., 2002)***. However, residual ovarian function after laparoscopic excision of ovarian cysts is a major and still unsolved topic in this field.

Ultrasound guided aspiration of endometriomas is feasible. However, drainage alone is ineffective as a therapeutic procedure and the applications of aspiration of endometriomas appear limited to some cases with diagnostic intent ***(Zanetta et al., 1995)***.

So in this study we evaluate the effect of the laparoscopic ovarian fenestration coagulation versus aspiration of ovarian endometriomas on ovarian reserve.