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Endometriosis Patient Education

Endometriosis is defined as endometrial glands and stroma located outside the uterine cavity. Historically, endometriosis was thought to be caused by retrograde menses or celomic metaplasia; which is undifferentiated cells in the peritoneal cavity differentiating into endometrium. There is evidence that there is a genetic component with a likely dysfunctional immune response that causes endometriosis to persist and grow. Recent research has demonstrated the roll of stem cells in the development of endometriosis; stem cells derived from the bone marrow can differentiate into endometrium and endometriosis and suggests that several diseases are involved in the syndrome of endometriosis.

The diagnosis of endometriosis can be made based on the medical presentation of dysmenorrhea and chronic pelvic pain without evidence of infection. The diagnosis of endometriosis can also be made surgically. For most patients the first-line treatment for a clinical history suggestive of endometriosis without adnexal masses is medical. Patients are given continuous rather than cyclic oral contraceptives and nonsteroidal anti-inflammatory medications to control endometriosis related dysmenorrhea. When patients fail medical therapy then surgery or second lined drugs are considered. Surgery is recommended if the diagnosis is unclear or there are contraindications to medications.

Laparoscopy is often used to diagnose and treat endometriosis. Extensive resection of endometriosis results in a reduction in symptoms for 3 months postoperatively. 44% of women have a recurrence of pelvic pain after one year. After 6 years, the rate of recurrent pelvic pain is 74%, with most symptoms recurring within 2 years. Patients who received a diagnostic laparoscopy with simple ablation followed with a GnRH agonist after surgery have a similar postoperative pain reduction rates as extensive laparoscopy and might offer the best long-term results.

Patients with endometriomas that cause pain had the lowest rates of recurrence and improvement in postoperative pain symptoms when treated by surgical excision of the entire cyst wall. If the diagnosis of an endometrioma is clear, medical therapy or simple drainage may be preferable if removal significantly reduces ovarian reserve and future fertility.

GnRH agonists can be used in patients who have failed oral contraceptives or declined surgery. GnRH agonists are injected intramuscularly to create a menopausal state resulting in a drop in estrogen production. There is no good evidence that the use of GnRH agonist is more effective than the use of continuous oral contraceptive pills plus nonsteroidal anti-inflammatory medications. GnRH agonists have side effects of bone loss and vasomotor symptoms which can be reduced with add back therapy (5 mg of daily norethindrone acetate). Some patients preferred to use an oral contraceptive pill as add back therapy to reduce side effects. GnRH agonists are often used for at least 12 months with add back; however, pain usually returns in 75% of patients

after 3 months of discontinuation. Progesterone alone can be used to treat endometriosis; however, higher dosages of 10 mg 2-3 times a day are needed for pain control and are associated with excessive bloating, depression and weight gain. Danazol was used to in the past to treat endometriosis pain; however, has side effects like acne, excessive hair growth and reduced libido.

The levonorgestrel releasing intrauterine device has been shown to reduce postoperative dysmenorrhea and recurrence of endometriotic implants when inserted after laparoscopic surgery. Recent studies have also demonstrated that the use of GnRH agonists in combination with an aromatase inhibitors significantly improved pain. Recent research with progesterone antagonists like misfepristone 50mg/day reduced pain and demonstrated the regression in lesions.

Endometriosis is found in 20-50% of infertile women. Without treatment, spontaneous monthly fecundity rate of between 2-3%. Surgery for endometriosis related infertility will increase monthly fecundity to under 5%. Ovulation induction with artificial insemination increases monthly fecundity to 9% and the use of gonadotrophin controlled ovarian hyperstimulation will increase monthly fecundity to about 15%. In vitro fertilization has the highest monthly success rates with pregnancy rate of 30-50% per cycle depending upon age. We always offer a referral to the reproductive endocrinologists early in the treatment of the patient with infertility and endometriosis.

The treatment of endometriosis ranges from mild to moderate to severe cases. Patients suffer chronically from mild to severe dysmenorrhea and chronic pelvic pain, side effects of medications and are at high risk for surgical complications and repeat surgeries. Recent research demonstrates the many mechanisms that cause endometriosis and explains why disease can be found remote from the peritoneal cavity and resists treatments even after hysterectomy. Patients who fail conventional medical therapy likely have progesterone resistance. Endometriotic implants produce high concentrations of estrogen and fuel their own resistance. Patients with endometriosis likely have genetic changes to inhibit implantation which reduce fertility even after complete surgical resection of endometriosis.

The treatment of patients with endometriosis involves a clear understanding of patient goals, degree of pain management, desire for fertility and an understanding that endometriosis is a disease that can be chronic and introital. Fortunately research is continuing.