Endometriosis will not Lower IVF Success

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Effects of endometriosis on fertility treatment success has always been a controversy. When a woman is diagnosed with endometriosis, she receives multiple contradicting advises from multiple sources. It is very difficult for women to sort through these recommendations and pick the ***one that are suitable for her symptoms and reproductive plans***. Indeed reproductive plans and symptoms are by far more important than the nature of the problem, anatomically, as well as what one reproductive surgeon or a fertility specialist think you should do.

Reproductive Plans in women diagnosed with endometriosis

Simply do you want to fave a baby or did you complete your family?. If you want to have a baby, then an initial infertility evaluation is required: testing for ovulation, ovarian reserve, male factor and Fallopian tube patency is required. Sometimes other forms of pelvic imaging e.g MRI is needed to test for ovarian cysts or endometriomas…Endometriosis itself may require laparoscopy and biopsy for accurate diagnosis.

Women are then categorized according to findings: endometriosis only, endometriosis with other factor or endometriosis with low egg reserve. That will facilitate further advice.

One very important indicator that you are not talking to the right person if he or she did not complete the evaluation for male factor and egg reserve. These are essential tenets of fertility and failure to test them will have impact on success. It would be absurd to do surgery for endometriosis for example to discover later that you have a severe male factor that require IVF -ICSI.

If you desire future fertility, reproductive endocrinologists should taylor their advice to preserve reproductive tissues and minimize surgery. There is a strong evidence that surgery in the ovary reduces ovarian reserve, irrespective of technique used.

Pain in women diagnosed with endometriosis

If the main symptom is pain, in different forms, then medical or surgical treatment can be employed. in women who completed their families. Medical treatment e.g non cyclic oral contraceptive pills of GnRH agonists (depot lupron) prevent pregnancy. From a practical stand point, surgery im many cases may not promote pregnancy in women with with mild and severe endometriosis.

> ***Women diagnosed with endometriosis and report pelvic pain should focus on getting pregnant. Pregnancy can suppress endometriosis for a long time after delivery***

Fertility Treatment in Women Diagnosed with Endometriosis

Absolutely avoid doing surgery in the ovaries in women interested in pregnancy. This is crucial. Opening endometriomas and tripping their walls leads to significant loss of egg reserve. The only indication to remove endometriomas if they are complicated e.g rupture or suspicion

of malignancy. There are many reports of finding eggs in the wall of endometriomas after removal and reduction in egg reserve markers after surgery. Bilateral surgery for endometioma can lead to menopause, irrespective of the skill of the surgeon.

In minimal and mild endometriosis with reasonable egg reserve, normal sperm analysis and open fallopian tubes, ovarian stimulation and IUI can be entertained in young women (38 years).

In women with moderate or severe endometriosis e.g endometriomas, blocked tubes.. or those with associated male factor infertility or low egg reserve, IVF yields a much higher pregnancy rate.

IVF Success in Women with Endometriosis

Recent analysis of IVF cycles performed in women with endometriosis with or without other factors (tubal, male, unexplained infertility) indicates that

Isolated endometriosis is associated with similar IVF success and live birth to other infertility factors, though the number of eggs retrieved may be smaller.

Endometriosis when associated with other factors e.g male or tubal factor may have lower success rates. The live birth rate is still excellent 35 to 45% per cycle.

Endometriosis-and-IVF

Treatment of Endometriosis related pain

Both medical treatment and surgery are effective for treatment of pain. Endometriomas do not respond to medical treatment. Endometriosis on the peitoneum and and other organs respond to medical and surgical treatment. Adenomyosis (endometriosis of

the uterus) is a surgical disease and respond only to surgery.

In general medical treatment is successful but requires patience and can be used for a longer period of time with add back therapy.

If you are diagnosed with endometriosis there is wide range of treatment options. Treatment should be personalized to your reproductive goals and symptoms not to physician expertise and bias. There is really little controversy about what need to be done in each situation. Women just need to be specific about what they want: get rid of pain or have another baby. IVF success is not impaired in women with endometriosis.

Endometriosis: Fertility Options are Clear

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Endometriosis means tissue of the lining of the uterus is present outside the its normal boundaries. It can involve the pelvic lining, the ovaries (endometrioma), the fallopian tubes, the intestine and the muscle of the uterus (adenomyosis). As menstruation takes place in the uterus, these deposits menstruate into itself, become distended and causes pain (pain with menstruation, chronic pelvic pain, pain with intercourse, urination or defecation). Moreover, because of its chemical effects or associated pelvic scarring endometriosis may cause infertility.

Accurate diagnosis of endometriosis requires laparoscopy and

biopsy of the areas suspicious because of its appearance. If you are suspect you have endometriosis (usually because of pelvic pain) and want to get pregnant or having difficulty becoming pregnant you face a small dilemma. You are usually given different recommendations from different headquarters, depending on their expertise and biases. Examples of such recommendations:

‘Lets do laparoscopy to diagnose endometriosis, remove any endometriosis we find as well as remove any scarring’

‘Lets give you medications for endometriosis’

The questions is which recommendation is “good for your specific case”.

Few basic principals about endometriosis treatment

These are not disputed principals, just facts related to the treatment of endometriosis in general.

1. Accurate diagnosis of endometriosis requires a laparoscopy and pathological examination of tissue biopsies obtained.

2. Medical treatment of endometriosis does not allow you to get pregnant while you are using it: oral contraceptive pills, synthetic progesteron, danazol and GnRH agonists (lupron) prevent ovulation. While you are taking these medications you will mostly not ovulate so you will not get pregnant.

3. Endometriomas (endometriotic cysts of the ovary) do not respond to medical treatment. Moreover their removal mostly require removal of a part of the ovary, because they are firmly attached. Thus their removal can lower the number of eggs remaining in the ovaries (ovarian reserve).

Treatment of infertility associated with endometriosis

Though each specific situation may require a different course

of action as recommended by your physician, there are general guiding principals for treatment of infertility when endometriosis is suspected.

1. Infertility investigation: do not make any treatment decisions without a full fertility workup. Do not proceed unless you know your partner sperm analysis, obtained the results of ovarian reserve tests, tested if your fallopian tubes are open or not via an HSG as well as general preconception lab tests. Why? if you undergo surgical treatment for endometriosis and later discovered that your partner has very low sperm count requiring IVF and ICSI, then surgery had no potential to help you get pregnant.

2. What is your priority treating infertility or treating pain? This is important because medical treatment, although effective in treating pain cannot help you with infertility because it mostly prevents ovulation. Please note that the best treatment for pain associated with infertility is pregnancy. The large amounts of progesterone produced during pregnancy suppresses endometriosis, sometimes for years after delivery.

3. Resection of endometrioma; If a cyst consistent with endometriosis is seen on ultrasound be very careful with a recommendation to resect that cyst. Resection requires surgery. it reduces ovarian reserve because of removal of ovarian tissue. Unless the cyst is suspicious of malignancy or complication they are better left alone with observation while proceeding directly to fertility treatment e.g IVF. There is no evidence that removal of the cyst improves IVF success. On the contrary, removal of the cyst is associated with low response in that ovary.

4. Laparoscopis surgery for mild and minimal endometriosis: There are two studies that showed an improvement in pregnancy rate after laparoscopy for mild endometriosis. To put this in perspective, yes laparoscopy for infertility and mild

endometriosis and infertility is an option but the magnitude of benefit in this case is limited at best. You first have to undergo surgery (with its possible complications). If endometriosis is found and ablated you would get a small bump in pregnancy rate in the year following surgery. The surgery may also help you with pain. On the contrary, endometriosis may not be found and you still have to try after surgery. Considering all the risks and benefits, the odds for pregnancy is not dramatically improved.

5. An alternative approach to mild and minimal endometriosis: The general thinking about infertility associated with minimal and mild endometriosis is that it is unexplained infertility. In these cases there is no mechanical distortion of pelvic organs and fallopian tubes are open. If sperm analysis is within normal enhancing fertility could be achieved through stimulation of the ovary to produce multiple eggs followed by IUI or IVF. This approach avoids surgery with its potential complication. IVF carries approximately three times the odds of pregnancy and can control the risk for multiple pregnancy, compared to IUI.

6. Moderate to severe endometriosis: These cause distortion or blocking of the fallopian tubes. Surgery is an option but its much more complicated than mild cases and has the risk of injury to the intestine, ureter, fallopian tubes, oavries..Scarring also may recur after surgery. An alternative approach is to proceed to IVF. It avoids major surgery and can address tubal, male and ovulatory factors. IVF success is not reduced in women with endometriosis.

7. Adenomysis (endometriosis of the uterus): MRI is sometimes needed for accurate diagnosis of adenomyosis. Adenomyosis is a surgical disease and its cure require removal of the whole uterus. This is because it cannot be shelled out of the uterus like a fibroid. Better ignored and proceed with fertility treatment.

Do not make any decisions related to infertility before a complete workup; sperm analysis, ovarian reserve tests and fallopian tube patency test. Avoid surgery in the ovary as it may reduce ovarian reserve. There is no established evidence that the chance for successful fertility treatment is reduced in women with endometriosis. Laparoscopic surgery is an option but is associated with surgical complications.

Endometriosis & Infertility

Endometriosis & infertility commonly coexist. Endometriosis can have profound effects on woman's fertility and the ability to conceive in the future, either by virtue of the disease itself or its treatment. Endometriosis means that the tissue that lines the uterus is found in other areas, most notably the ovaries and the lining of the pelvis, frequently causing pelvic pain and infertility. In early stages of endometriosis, the implants in the pelvis may chemically affect various stages of reproduction including fertilization and implantation. In later stages, endometriosis incites scarring that can block the fallopian tubes and can produce cysts in the ovaries called endomertiomas. Experienced reproductive endocrinologist can diagnose endometriomas with high degree of accuracy using ultrasound. In other areas the diagnosis of endometriosis may requires laparoscopy.

Treatment of Endometriosis

Women seek treatment for endometriosis because of pain or infertility. Treatment for endometriosis is either medical or surgical.

Medical treatment For Endometriosis

It entails suppression of ovulation and estrogen production. Estrogen stimulates the growth of endometriosis. Medical treatment has side effects and is not suitable for women seeking pregnancy now. It, however, does not have a long lasting effects on fertility. Medications used include oral contraceptive pills, androgenic medications or gonadotropin releasing hormone agonists as depot leuprolide. Women on these medications does not need to consider fertility preservation strategies because of treatment.

Surgical Treatment For Endometriosis

Surgery aims at removal of endometriosis spots in the pelvis or excising endometrioma cysts from the ovary. Cutting the ovary and stripping the wall of the endometriomas is associated with loss of eggs during the procedure. The ovary, where the procedure is done commonly have less reserve and may show lower response to fertility medication. The risk for decreased fertility is higher if the procedure is done on both ovaries. It is also higher after extensive surgery, commonly associated severe disease in the pelvis. Sometimes the ovary need to be completely removed . Removal of endometriosis deposits in the pelvis-usually burning them using cautery-can also incite scarring that can block the fallopian tubes. Women undergoing surgery for endometriosis should consider fertility preservation. Aspiration of endometriomas is generally not a recommended treatment as they tend to recur and can cause infection.

Fertility Treatment in Women with Endometriosis

Severe Endometriosis mechanically blocks the fallopian tubs due to scarring. IVF appears to be the best treatment option.

Although endometriosis reduces the response to ovarian stimulation, it does not appear to reduce the pregnancy rates

Mild endometriosis does not distort the fallopian tubes. Two treatment options are available: laparoscopy with excision or burning of endometriosis or ovarian stimulation + IUI. Both can increase the chance for pregnancy but IUI is less invasive.

Fertility Preservation strategies in women with endometriosis

Reproductive age women diagnosed with endometriosis and advised to undergo surgery by their physicians should inquire about the possible effects of surgery on future fertility and consider fertility preservation strategies. Strategies include embryo cryopreservation, egg freezing or ovarian tissue freezing.

Embryo cryopreservation

Its the standard method for preservation of fertility. It requires stimulation of the ovaries using fertility medication for approximately 10 to 12 days, followed by egg retrieval. Eggs are fertilized using partner or husband sperm. The resulting embryos can be frozen indefinitely. One risk is that endometrioma cysts can get infected at the time of egg retrieval.

Egg freezing

It can be used in women not in stable relationship and declining the used of donor sperm. It require ovarian stimulation. This is followed by retrieval and freezing. Eggs are frozen using vitrification. Vitrification is associated with better survival after thawing than slow freezing. When desired, the eggs are thawed and fertilized using intracytoplasmic sperm injection-ICSI and the resulting

embryos are transferred to the uterus.

Endometriosis and Ovarian Cancer

It was noticed that women diagnosed with endometriosis has a small increase in the risk for certain rare types of ovarian cancer. Its essential that endometriomas in the ovary be thoroughly investigated using ultrasound and other imaging modalities and sometimes blood tests. Surgery may be needed to remove the cyst and submit it for pathological examination to exclude cancer.