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Surgical Intervention For Ovarian Endometriosis With Kissing Ovaries And Fertility Outcome.

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ABSTRACT:
Introduction: Endometriosis is a state of chronic inflammation in the pelvis and is characterised by endometrial-type tissue outside of the uterus. Although exact prevalence of endometriosis is unknown, it roughly affects 2 to 10% of the female population, but 30 to 45% of females with infertility [1] Pelvic endometriosis commonly involve the ovaries, and bilateral involvement occurs in one third to one half of cases [2,3]. Ovarian endometrioma rarely exceeds 10–15 cm in diameter [2,3].

Case summary: A 25 Female, Nulligravida with married life of 3 years presented to the OBGY OPD anxious to conceive since 1.5 years. She also complains of intermittent Pain in lower Abdomen during menses since 1 year, aggravated during menses and relieved on medication.. She had a history of irregular cycles lasting 3-5 days between 28-60 day intervals with dysmenorrhea.Per abdomen was soft, non tender with no other significant findings. Speculum examination revealed white foul smelling discharge. On per vaginal examination, B/L fornices were found to be full but with no tenderness. White discharge noted as well. Radiological investigation was advised and a 3D ultrasound was done. Patient had mild adenomyosis with B/L bulky ovaries and multiple endometriomas with left hydrosalphinx. Patient was posted for a video

hysterolaparoscopy during which B/L endometriomas noted with kissing ovaries appearance. Bowel was adhered to the endometriomas and left hydrosalphinx noted along with endometriotic patches on POD. B/L endometriomas drained and hydrosalphinx excised. Adhesiolysis done. Patient withstood the procedure well and discharged two days later and asked to follow up in the OPD after full recovery for further infertility evaluation.

Conclusion: Endometriosis affects day to day life of a woman and fertility by making the in vivo environment harmful for an oocyte or an embryo. Theoretically, surgical treatment of endometriosis could create a more favorable environment for successful conception and relief of symptoms.

Keywords: Endometriosis, Infertility, Endometrioma

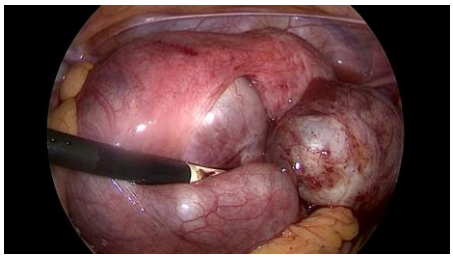
CASE REPORT:

Introduction: Endometriosis is essentially a chronic inflammatory state characterised by presence of extra uterine endometrial tissue. With unclear knowledge about the prevalence of the disease, its understood that 2-10% of women are affected with 30-45%of infertility patients suffering from it. [1] The factors responsible for infertility in endometriosis have been attributed to distorted pelvic anatomy and molecular alteration leading to excess production of prostaglandins, oestrogen, growth factors, reactive oxygen species, cytokines, etc. [4]. Various studies have shown that the molecular alterations in endometriosis lead to ovarian, tubal, or endometrial dysfunction, which leads to infertility [5-7]. The progesterone resistance and hyperestrogenic state lead to chronic inflammation making the endometrium non-receptive for normal embryo implantation and has been suggested as a significant contributor to infertility [8]. Xu et al. found that even in mini- mal to mild endometriosis, oocyte quality is impaired because the mitochondrial structure and function are hampered [9]. In endometriosis, the granulosa cells are resist- ant to luteinizing hormone (LH) to some extent; there is hypothalamic-pituitary-ovarian axis dysfunction with abnormal LH production [10], which affects ovulation. So, distorted tubo-ovarian relationship, impaired folliculogenesis, hormonal dysfunction, disturbed local milieu, fertilization failure, and impaired endometrial receptivity are causes of endometriosis-related infertility.

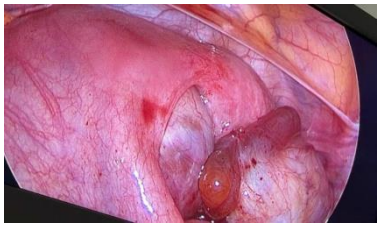
Case summary:

A 25, Female, Nulligravida with a married life of 3 years presented to the OBGY OPD of DR. DY. Patil Medical College and hospital, Pimpri , anxious to conceive since 1.5 years. Patient also has complains of intermittent lower abdominal pain since 1 year, which was aggravated during menses and relieved on usage of NSAIDs. She gives no history of other complaints. Patient has had history of irregular cycles since 8 months- 3-5 day cycles/28-60 days/with dysmenorrhea and no clot passage, using up to 2-3 pads/day. Prior to 8 months, patient had regular cycles with no such complaints. Obstetric History showed patient was married for three years, and had a Nulligravid status. Past/Personal and Family history noted to be insignificant. On examination, general condition was fair. Vitals were stable, P = 88bpm and BP = 124/78mmHg. No evidence of pallor/ icterus/ cyanosis/ lymphadenopathy/ edema. CVS and RS were auscultated and found to be within normal limits. Per abdomen examination was done and no abnormal findings were noted on

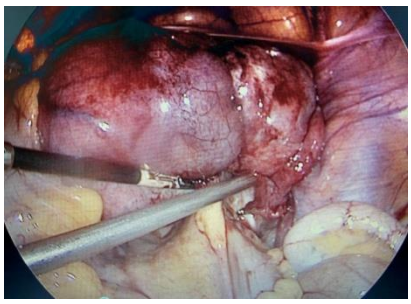
inspection. On palpation was soft, non tender. Per speculum and Per vaginal examination only revealed copious non foul smelling white discharge and fullness of fornices. A series of tests were advised. Her Haemoglobin was 13.4g/dl, TLC 6800/mm3. Platelet count of 1.65 lakhs/mm3. Her Sr FSH is 3.72mIU/ml, Sr LH 23.17mIU/ml, Sr. Prolactin 4.20, Sr. AMH 3.57ng/ml. The rest of her laboratory investigations were within normal limits and her serology was non reactive. The patient was advised a 3D ultrasound of the abdomen and pelvis. It revealed that the uterus was of normal size, the endometrial thickness being 7mm. Multiloculated bilateral ovarian endometriomas/ chocolate cysts noted in the right ovary largest being 32x34mm. Left ovary showed a cyst of size 66x51mm. All cysts showed ground glass internal echoes and multiple thin internal septae. Left ovary measures 86x68mm and right ovary 43x50mm. Kissing ovaries appearance was noted. Left sided hydrosalphinx of size 38mmx40mm noted. Considering the above findings, a video hysterolaparoscopy was planned to evaluate the condition with patient consent. Hysteroscopic findings: cervix normal, cervical canal normal. Uterine cavity normal. Bilateral Ostia seen and found to be normal. Laparoscopic findings: peritoneal cavity inspected and found to be normal. Bilateral ovarian endometrioma noted (left measuring 8x6 cms and right side about 3x4cms) giving kissing ovaries like appearance. Bowel adhered to the above mass giving a plastered appearance of the endometriomas and bowel. Left sided hydrosalphinx of 4x4cms noted. Deep seated endometriotic patches noted in the Pouch of Douglas- Stage 4 endometriosis noted. B/L endometriomas drained and cyst wall removed. Hydrosalphinx excision done along with left salphingectomy. Adhesiolysis attempted and adhesions removed. Methylene blue test revealed a left sided tubal block.intercede application was done. Haemostasis was achieved, patient withstood the procedure well and was discharged within 3 days. She was asked to follow up in the OBGY OPD for suture removal and further evaluation of infertility. On further evaluation it was noted that there was a decrease in her Sr. AMH levels with a value of 3.45ng/ml. Patient was counselled for further work up for management of infertility, and chose to follow up elsewhere. A follow up was maintained with the patient and it was noted that she conceived spontaneously 8 months after the surgery.



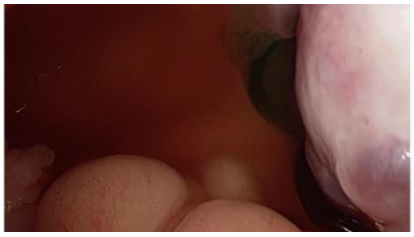
B/L kissing ovaries on laparoscopy

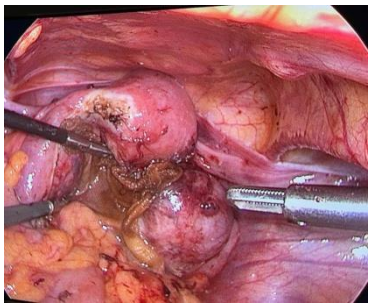


left sided hydrosalphinx 4x4cms

 adhesions to bowel and peritoneum

 after adhesiolysis of cysts

 right sided methylene blue spill noted

 interceed application done

Discussion: Endometriosis is a multifactorial disease affecting the day to day lives of many women. It is important to correctly diagnose and manage the condition with respect to the problems faced by the woman and its outcome. Many studies note that there is a decrease in ovarian reserve in post operative women and have to resort to IVF for further management. Evidence indicates that the primary benefit of surgical treatment of endometriosis is relief of pelvic pain. A Cochrane review in 2008, including two randomized controlled trials, concluded that laparoscopic excision of an endometrioma is associated with a decrease in symptoms of dysmenorrhea, dyspareunia, and non menstrual pelvic pain [13]. In our study, it was noted that ovarian reserve was not affected as compared to other cases, as patient conceived spontaneously. It's also imperative to note the presence of a hydrosalphinx, which was excised that may have contributed to the complaints faced by the patient. For individuals who are infertile, ovarian endometriomas—a typical sign of endometriosis—create a challenging scenario. The mechanical stretching of the ovarian cortex, an inflammatory response with cytotoxic oxidative stress, and increased fibrosis may all play a role in how these endometriotic cysts lead to infertility. The most common clinical approach for treating endometriomas is surgery, and the most popular surgical procedure is stripping the endometrioma

away. [14]Although this method increases the likelihood of spontaneous pregnancies and has other benefits, it has also been demonstrated to significantly deplete ovarian reserve. Individualised treatment for the patient may be best suited for each patient

Conclusion:

Endometriosis has been considered to independently cause damage over time, hereby decreasing fecundity and promoting the development of a shortened reproductive window (11). Although clinically-recognized associations have been reported, the definite cause-effect relationship between endometrioma and infertility remains unclear. Surgery has long been considered the primary treatment for infertility in cases of endometrioma (12). Overall, an informative literature is not available and, consequently, dealing with infertile women with deep endometriosis is a complex task. Physicians must make important decisions without robust bases. In such a scenario of uncertainty, a cautious attitude should be envisaged. That being said, each case should be evaluated thoroughly and a plan of action is to be devised for the same.

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