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Case Report

The first case of ethanol sclerotherapy in 1998. Management of recurrent endometriosis after TAH+BSO – report of three cases

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ABSTRACT

The first case of Ethanol sclerotherapy (EST) in 1998. Management of Recurrent Endometriosis after TAH+BSO, three cases are presented. The objective is to bring to focus the pitiable plight of these women suffering from severe pain abdomen prior to surgery and again after surgery due to recurrent disease. The dilemma of the doctor in deciding the best possible method of managing these cases. To present the different methods adopted to alleviate the pain and treat recurrences three decades ago. To discuss the current management trends. Case Report 1: Mrs. L. 46 years P2 L2 was operated for stage IV endometriosis. TAH+BSO was done on 5.2.96. A scan was done on 27.7.97 revealed an endometriotic cyst in the pelvis, 4.9x4.8 cms and 40 ml of thick chocolate material was aspirated vaginally. Ethanol, 5 ml was injected in the cyst. By three months there was reformation of endometrioma and a repeat second aspiration was done. Danazol 400 mgs/day, in divided doses was given for three months. Two years after TAH+BSO, third time aspiration of 7 ml thick chocolate liquid was done from 2 cms cyst and 4 ml spirit, absolute alcohol was injected on 15.1.98. We present our first case of ethanol sclerotherapy to treat recurrent endometriotic cyst after hysterectomy and bilateral salpingo oophorectomy in 1996-1998. In two other cases ERT had resulted in early recurrence of endometriosis, hence should be avoided. Endometriosis being a recurrent disease, the management decisions had to be individualized. We have discussed about Ethanol sclero therapy, reasons for recurrence after TAH+BSO, and the side effects of Danazol.

Keywords: Endometriosis recurrence, Ethanol sclerotherapy, ERT, Endometriotic cyst

INTRODUCTION

Treatment strategies usually aim to alleviate pain and suppress or eradicate the endometriotic lesions. Many clinicians believe that surgical castration would lead to regression of remaining endometriotic lesions. Furthermore, hysterectomy with ovarian conservation was reported to have a 6-fold risk for development of recurrent pain and an 8.1-times greater risk of reoperation, need to be weighed against the need for hormone replacement and potential long-term impact of oophorectomy.^{1,2} A

population-based study from Sweden also showed that hysterectomy with preservation or removal of ovaries resulted in a significant and long-lasting reduction in the pain symptoms.³ The reported recurrence rates following surgery for colorectal endometriosis in the studies with longer than 2 years follow up were 5–25%.⁴ Estrogen only HRT should be avoided and combined HRT preparations should be recommended, even after a hysterectomy. In addition, some medical therapies used for endometriosis, such as gonadotropin releasing hormone agonists or progestins reduce bone mineral density. Women with a

history of endometriosis are more likely to become menopausal at an early age due to bilateral oophorectomy or repeated ovarian surgery. Estrogen only HRT should be avoided and combined HRT preparations should be recommended, even after a hysterectomy.⁵

Women with an induced or surgical menopause due to endometriosis are usually younger women, below the age of natural menopause. The loss of estrogen can predispose them to osteoporosis and cardiovascular disease. HRT has been shown to be protective for both factors.⁶ Ethanol sclerotherapy for an endometrioma was first described by Akamatsu et al in 1988, with six procedures performed on five patients.⁷

Mechanism of action

Ethanol injures endometrioma's pseudo capsule with a mechanism including cytotoxicity, thrombosis, and cells hypertonic dehydration.⁸⁻¹⁰ Ethanol sclerotherapy (EST) continues to be a popular option, particularly due to its potential protective effect on ovarian reserve compared to cystectomy. EST, many recent publications have endorsed EST as a safe alternative modality of treatment.⁸⁻¹⁵ The review examines the safety, efficacy, and impact of EST on ovarian reserve, IVF outcomes, and recurrence rates.¹⁶ Comparative studies suggest that pregnancy rates following EST are similar to or better than those after cystectomy, with the added benefit of more oocytes retrieved, which may lead to higher cumulative live birth rates.¹⁶ Ethanol sclerotherapy shows promise as a treatment for ovarian endometriomas in IVF patients. It effectively reduces the size of endometriomas and alleviates associated symptoms without significantly compromising the ovarian reserve.¹⁶

Future of Sclerotherapy in the treatment of endometriosis, well described.^{16,17} Danazol is a synthetic, orally active steroid medication, the 17 alpha isoxazol derivative of ethinyl testosterone. Danazol is an effective medication for endometriosis that works by suppressing estrogen and increasing androgen levels, causing significant side effects, including acne, weight gain, irregular periods, muscle spasms, mood swings, and potentially irreversible androgenic changes like voice deepening or hair growth. Though Danazol was used in the nineties, the side effects have almost eliminated its use in endometriosis.

CASE REPORT

Case 1

Mrs. L. 46 years P2 L2 was operated for stage IV endometriosis. This lady suffered from severe lower abdominal pain. She would have tears even before a pelvic examination was made. Even before the first gynaec examination, had to counsel her that I would not hurt her and stop immediately if she told me. Even speculum examination for visualizing the cervix, was a challenge.

TAH+BSO was done on 5.2.96. One and a half years after surgery, she was suffering from pelvic pain and a scan was done on 27.7.97 revealed an endometriotic cyst in the pelvis, 4.9×4.8 cms and 40 ml of thick chocolate material was aspirated vaginally. Ethanol, 5 ml was injected in the cyst. She did not start danazol as advised. Those were the days, drug danazol was being used, which later we discontinued usage due to the side effects.

By three months there was reformation of endometrioma and a repeat second aspiration was done. Danazol 400 mgs/day, in divided doses was given for three months. Two years after TAH+BSO, third time aspiration of 7 ml thick chocolate liquid was done from 2cms cyst and 4 ml spirit, absolute alcohol was injected on 15.1.98.

This was the first case of sclerotherapy with Ethanol by the author. Around this time, between 1996 and 1998, there was a case of lymphocyst formation in the left iliac fossa after radical hysterectomy, BSO and bilateral pelvic lymphadenectomy for an early stage of carcinoma cervix. The lady is alive and doing okay now. This lymphocyst was managed by the surgeon by injecting ethanol. After discussion with Dr. S.S. Reddy, a popular surgeon in Hyderabad, who would operate in Swapna Health Care, the author (Dr. Pratibha) realized the same principle could be adopted to manage endometriotic cyst.

Hence proceeded with EST on 15.01.1998. There was no further recurrence and the woman was happy. Scan on 25.8.98 reveals a small lesion with? fibrosis inside. After Sclerotherapy, patient never had a problem.

Case 2

Mrs. U. 32 years P2 L2, two LSCS had operative laparoscopy for stage III endometriosis on 6.5.96. She had post operatively Danazol 600 mgs for 3 months. For persistent pain abdomen she had TAH+BSO+excision of the endometriotic nodule from the anterior rectal wall+ Appendicectomy on 27.8.97.

Patient had ERT, Premarin 0.625/day (conjugated equine estrogen). After one month she reported with recurrence of symptoms. USG revealed endometrioma right Side of the pelvis 2.5×2.0 cms. ERT was stopped, patient had received Inj. Lupron depot 3.75 mgs/monthly for four months. After two months she developed osteoporosis on bone densitometry. She was started on Bisphosphonates. On USG the lesion has regressed remarkably but osteoporosis was present. This case brings to focus how at a young age BSO had to be performed. ERT caused a recurrence within a month. Lupron depot for four months resulted in osteoporosis. Sometimes we have to choose the lesser of the two evils.

Case 3

Patient S. 30 years P1 L1, C/O dysmenorrhea, sec. infertility. Had operative Laparoscopy for stage III

Endometriosis on 1.5.95. Post operatively 600 mgs danazol was given for 3 months. For severe and persistent pelvic pain, on 10.2.96, TAH+BSO was performed for stage IV endometriosis. The lady was started on Estrogen only replacement therapy (EORT). Used Premarin (conjugated equine estrogen), for one year. Again C/O pain abdomen after one year. USG revealed a cystic lesion 1.5 cms. ERT stopped and T. danazol 400 mgs/day was given for three months. Management of recurrent endometriosis and management of menopause after TAH+BSO are challenging circumstances.

DISCUSSION

A previous study reported a high recurrence rate of 62% after hysterectomy in advanced stages of endometriosis if the ovaries were conserved.¹⁸ Gemmell et al reported that most post hysterectomy recurrences of endometriosis occurred in women receiving HRT especially when EO-HRT was used.¹⁹ The purpose of the case report in this study was to highlight the potential risk associated with EO-HRT after pelvic clearance for severe endometriosis. The reported case clearly highlights the real risk of recurrence of potentially severe endometriosis when estrogen only HRT was used.²⁰

With a high recurrence rate (~50%) after conservative surgery, which involves complete excision of endometriosis without hysterectomy.^{21,22} Up to 37% of premenopausal women will eventually undergo the radical surgery in the form of total hysterectomy and bilateral salpingo-oophorectomy (TH-BSO) as a more definitive and permanent solution.²³ This approach (TH-BSO) induces iatrogenic premature or early menopause in these women who will need hormone replacement therapy (HRT) for many years until at least their natural age of menopause.^{24,25}

Progression of disease on EO-HRT in our case can be explained by the well-established oestrogen dependence of endometriotic lesions. Molecular studies have revealed the overexpression of oestrogen receptor beta (ER), which is >100 times higher in endometriotic lesions compared to normal endometrial tissue. Furthermore, the highly expressed oestrogen in endometriotic tissue is present in its most biologically active form.^{26,27} The recent guidelines of both BMS and ESHRE acknowledge the limited evidence with regard to the optimal HRT regimen in women with endometriosis.

Although there is currently limited evidence for the duration of the progestogen component of HRT, both BMS and ESHRE guidelines recommend C-HRT until natural age of menopause.^{28,29} Although long-term use of progestins is associated with a small increase in the risk of breast cancer, the use of progesterone seems to be free of that risk.^{30,31}

CONCLUSION

The recurrence rates following conservative surgery and TH+BSO have been cited. EO- hormone replacement therapy has been abandoned. It has to be combined HRT even after hysterectomy. The use of Danazol, due to irreversible voice changes has been stopped. Ethanol sclerotherapy appears a promising new modality to induce fibrosis in endometriotic cysts of the ovary. We learn through experience.

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