The Use of GnRH Agonists in the Treatment of Endometriomas With or Without Drainage

Pages with reference to book, From 30 To 32

Sertac Batioglu, Havva Celikkanat, Mustafa Ugur, Leyla Mollamahmutoglu, Huseyin Yesilyurt, Mehmet Kundakci (Dr. Zekai Tahir Burak Women's Hospital, Ankara, Turkey.)

Abstract

To assess the efficacy of GnRH-agonist therapy in the treatment of endometriomas with or without surgical intervention, 26 women with laparoscopically proven endometriomas larger than 3 cm were recruited to the study. Fourteen women with 19 endometriomas (5 bilateral), had drainage of endometrioma at initial laparoscopy. After the procedure, ovarian suppression was done with GnRH-a therapy for 6 months. The second group which consisted of 12 women, had 17 end ometriomas. No surgical procedure was perfonned. They received only GnRH-a therapy for 6 months. On repeat laparoscopy, in the first group, the rates of decrease in ovarian AFS scores of endometriomas and complete resolution were found as 100% and 37% respectively. In the second group the response was only 18% ($p<0.0001$). It was concluded that drainage of the cyst (surgical therapy) combined with postoperative GnRH-a suppression is a better treatment modality than the use of GnRH-a (medical therapy) alone for endometriomas. (JPMA 46:30,1996).

Introduction

After the report of Meidrum[1], the usage of GnRHagonists has revealed a marked improvement in the medical treatment of endometriosis[1-6]. GnRH-agonist therapy reduces the size and score of endometriosis[1-7]. but complete resolution of an endometrioma larger than 1 cm diameter is not achieved[3,5-7]. Previously, laparotomy was used for surgical approaches to endometriomas; now gynaecologists use operative laparoscopy alone[7-10] or combined with medical ovarian suppression[3,11]. In this study our aim was to compare the efficacy of GnR H-a in the treafi nt of or without surgical intervention.

Patients and Methods

Twenty-six patients with ovarian endometnoma unilateral or bilateral, more than 3 cm in diameter, were included in the study. Two groups were forme The first group of 14 patients with 19 endometriomas (5' bilateral) had drainage of endornetrioma with adhesiolysis at the initial laparoscopy. They were opened with laparoscopic scissors at the most dependent part, to facilitate proper drainage. Immediate suction was routinely used to prevent spillage of the chocolate -like material outside the true pelvis. The cavities of endornetriornas were irrigated with Ringer's lactate solution. All incisions were left open without suturing. On completion of the procedure, 300 ml Ringer's lactate was left in the pelvic cavity to serve as hydroflotation medium[12]. After the operative laparoscopy, they had ovarian suppression with GnRH-a for 6 months. At the end of medical therapy, a second laparoscopy was performed to assess the results. If needed, further surgery (elimination of inner lining) was performed. The of 12 patients had 17 endometriomas (5 bilateral). No surgical procedure was done on initial laparoscopy. This group received only GnRH - a therapy for 6 months followed by a repeat laparoscopy to assess the effectiveness of GnRH-a therapy. Drainage plus coagulation of the inner lining was performed during this procedure.

Both groups were treated with a delayed release formulation of D- Tryp 6-LHRH (Decapeptyl 3.75 mg Fernng-Switzerland) intramuscularly at four week intervals for 6 months. The therapy was started on the 21st day of the menstrual cycle. Serum estradiol levels fell significantly to the postmenopausal range by the end of the first therapy at which they remained throughout the treatment.

The severity of disease was staged according to the revised AFS classification scheme[13]. The diameter of endometrioma determined the ovarian endometriosis scores which were defined as 4,16 or 20 points each. The response to treatment was assessed by using the changes in AFS ovarian endometriosis (endometnoma) scores. The disappearance of endometrioma was a complete cure and scored -0- points.

Results

The mean age, stage, ovarian endometriosis score, AFS score, implant and adhesion score of the two groups of patients are shown in Table I.

Table. I. Changes in endometriosis parameters.

	Group I		Group II	
	First look	Second look	First look	Second look
Age	27.92±4.66		31.33±6.09	
Duration of infertility	4.83±2.65		8.36±3.13	
Stage	3.64±0.49	2.71±0.82	3.50±0.52	3.41±0.51
Scores				
Endomet -rioma	19.57±1.26 -a-	7.78±7.36	18.58±1.97-b-	17.88±2.05
Implant	3.00±1.70-c-	1.14±3.2	4.33±1.6-d-	1.14±1.58
Adhesion	14.42±12.35-e-	10.30±8.97	13.16±12.60-f-	12.33±12.35
Total	44.28±19.73-g-	18.85±13.55	43.83±18.24-h-	38.83±17.42

*Values are means±SD of scores according to rAFS classification

*Group I drainage and GnRH-a, Group II GnRH-a only

*(a $p<0.01$), (b $p>0.05$), (c $p<0.001$), (d $p<0.001$), (e $p<0.01$) (f $p<0.02$) (g $p<0.001$), (h $p<0.01$)

In the first group, which had drainage at first laparoscopy and received postoperative GnRH-a therapy, the scores of endometnomas were decreased in 12 (63%) and complete resolution was found in 7 (37%) cases (Table II).

Table II. Comparison of the results of treatment in two groups.

	Group I (drainage first)	Group II (analog first)
Unchanged	0	14 (*82%)
Decreased	12 (63.2%)	3 (18%)
Complete resolution	7 (36.8%)	0
Total	19	17

Chi-square: 26.3704, $p<0.0001$ (1.878E-06).

Twelve endometriomas required further surgical intervention at the second - look laparoscopy. Statistically significant decrease in the mean values of rAFS. peritoneal implant and adhesion scores was achieved.

In the second group which received GnRH-a therapy alone, 14 (82%) endometriomas remained unaltered. In 3 endometriomas the ovarian 2AFS scores were decreased (18%) but the mean AFS scores had no significant change ($p>0.05$). The reason could be wrong timing for the second look laparoscopy which was done after the first menstruation following the end of GnRH-a treatment. This possibly allowed haemorrhage into the cavity of endometrioma. The effectiveness of GnRH-a therapy, was seen as a decrease in the scores of peritoneal implants reflecting the ovarian suppression. ($p<0.001$). There was a decrease in the adhesion score (p Seven patients with a complete cure were followed for 12. months and 3 pregnancies occured in this group (1 spontaneous, 2 with clomiphene). Of the remaining 4 patients, 3 developed recurrence of the disease.

Discussion

Treatment modalities for endometriomas vary from surgical excision only to a combination with medical therapy. The results of this prospective study supported the latter view. Results of the group which received GnRH-a therapy alone, showed that only 3 of the 17 endometriomas (17.64%) decreased in their ovarian AFS scores by shrinkage. These results are not as good as those reported in literature. Other workers have experienced that GnRH- a therapy cannot completely cure an endometrioma larger than 1 cm in Size[3,5,7]. Donnez found a shrinkage of ovarian endometriosis (more than >25%) in 73% of cases after buserelin therapy[3]. Endometriotic cells could not be totally suppressed by Buserelin because the ectopic foci are not governed by the control mechanisms as that of the uterine endometrial glands and stroma[14]. Therefore a surgical approach to endometriomas was recommended[6,10,13-16]. Recent reports describe the Iaparoscopic stripping of ovarian endometrioma[15,16]. Other methods, as drainage, drainage plus vaporization of lining and drainage plus coagulationof lining, havebeeninuse foralong time. The drainage method was selected in our first study group because excision of endometriomas is an additional risk for postoperative adhesions. Fayez[17] compared different laparoscopic methods for the treatment of endometriomas. Excision of endometriomas was not suggested as minimal adhesions were found in the drainage group with or without elimination of the inner lining. The technique of drainage followed by postoperative GnRH-a therapy decreased the ovarian AFS scores (100%) but, 12 of 19 (63.15%) endometriomas remained unaffected. Wood found that endometriomas persisted or recurred in 13.4% of cases in this study group

undergoing surgical excisionwithout any medical therapy[18].
Fayez reported persistence of endometriomas in 21% cases subjected to drainage plus postoperative danazol therapy[18]. The reason for a higher persistence rate in our study group could be attributed to the re-closing of the drainage incision followed by hemorrhage into the cavity due to menstruation after the first GnRH-a injection. Another study revealed that a quick recurrence of the ovarian cyst following drainage proved that drainage alone is ineffective. Drainage followed by GnRH-a therapy reduced the cyst size[19]. The present study concluded that surgical drainage of endometriomas followed by GnRH agonist is an effective method of treatment yielding better results.

References

1. Meldrurn, DR., Chang. R 3., Lu. J. eta!. Medical oopherectomy using a long-acting GnRh agonist-a possible new approach to the treatment of endometriosis. J. Clin. Endocrinol. Metab., 1982;54:81-83.
2. Donnez, J., Nisolle-Pochet, M and Roux, EC. Endometriosis- associated infertility: Evaluation of preoperative use of danazol, gestrinone and buserelin. Int. J. FertiL, 1990;35:297- 298.
3. Marana, R, Muzil, L., Muscatello, P. et al. Gonadotropin- releasing hormone agonist (Buserelin) in thetreatment ofendometriosis: Changes in the extent of disease and in CA-125 serum levels after6 months therapy. Br. J. Obstet. Gynaecol.. 1990:97:1016-20.
4. Donnez, J., Nisolle-Pochet, N., Clerck-Braun. F. et al. Administration of nasal buserelip as compared with subcutaneous buserelin implantfor endomethosis. Fertil. Steril., 1989;51 :27- 28.
5. Zom, JR., Matheison, J., Risquez, F et al. Treatmentofendometriosis with a delayed release preoperation of the agonist D-Tip6-luteinizing hormone releasing hormone: Long-term follow-up in a series of5Opatients. Fertil. Steril., 1990;53:401 -403.
6. Jacob, L.A., Field, CS. and Thie, J.L. Treatment of endometriosis with the GnRH agonist nafarelin acetate. Int. J. Fertil., 1991 ;36:30-32.
7. Fayez, J.A. and Collaza, LM Comparison between laparotomy and operative laparoscopy in the treatment of moderate and severe stages of endometriosis. Int. J. Fertil., 1990;35:272-74.
8. Daniel!, J.F, Kurty, B.R and Gurley, L.D. Laser laparoscopic management of large endometriomas. Fertil. Steril., 1991 ;55:692.
9. Reich, H. and Mc-Glynn, f Treatment of ovarian endometriosis using laparoscopic techniques. J.Reprod.Med., 1986;31:577-78.
10. Nezhat, C., Crowgery, SR and Garrison, C.P. Surgical treatment of endometiiosis via laser laparoscopy. Fertil. Steril., 1986;45:778-79.
11. Donnez, 3., Lemaire-Rubbers, M. Karaman, Y. et al. Combined (hormonal and microsurgical) therapy in infertile women with endometriosis. Fertil. Stern!., 1987;48:239-40.
12. Fayez, J.A. and schneider, P.J. Prevention of pelvic adhesion formation by different modalities of treatment. Ant 3. Obstet. Gynaecol., 1987;1 57:1184-85.
13. American Fertility Society. Revised American Fertility Society Classification of Endometriosis 1985. Fertil. Steril., 1985;43:351-52.
14. Nisolle-Pochet, M, Casanas-Roux, F. and Donne; J. Histologic study of ovarian endometriosis after hormonal therapy. Fertil. Steril., 1988;49:423-24.
15. Martin, D.C. Laparoscopic treatment of ovarian endometriomas. Clin. Obstet. Gynaecol., 1991 ; 34:452-54.
16. Cook, A.S. and Rock, J.A. The role of laparoscopy in thetreatment of endometriosis Fertil. Steril., 1991 ;55:663-64.
17. Fayez, J.A. and Vogel, ME Comparison of different treatment methods of endometriomasby laparoscopy. Obstet. Gynaecol., 1991,78:660-62.
18. Wood, C., Maher, P. and Hill, D. Diagnosis and surgical management of endometriomas. Aust. N.

Z. J. Obstet. Gynaecol., 1992;32:161-62.
19. Donnez, J.,Nisolle, M., Gillerot, S. et al. Ovarian endometrial cysts; The role of gonadotropin-releasing hormone agonist and/or drainage. Fertil. Steril., 1994;62;63-64.