

The Novel Use of Subdermal Implant Containing Etonogestrel Progestogen (ImplanonR) for the Treatment of a Difficult and Recurrent Case of Abdominal Wall Endometriosis, a Case Report

Keywords: Abdominal wall endometriosis; subdermal implant (Implanon); pain; Treatment.

Abstract

Background: Abdominal wall endometriosis is to be found to increase due to the rapid increase of caesarean section rates.

The Case: The author report a case of a 44 year old multiparous woman diagnosed with recurrent abdominal wall endometriosis after cesarean section few years ago for which she underwent wide surgical excision and was treated medically with GnRH agonists with no long term improvement. The case was successfully treated with a novel use of subdermal implant containing etonogestrel progestogen (Implanon®) with the addition of oral progestogen. After one year follow up; the patient is pain free and the mass has substantially reduced in size. The patient had some troubles with occasional breakthrough bleeding episodes which were treated in addition to some weight gain.

Conclusion: The use of subdermal implants can be used as an option for the treatment of abdominal wall endometriosis. However, more studies on more cases are needed.

Introduction

Endometriosis is an inflammatory condition characterized by lesions of endometrial-like tissue outside of the uterus which may be associated with pelvic pain and infertility [1]. Clinical symptoms include dysmenorrhea, dyspareunia, infertility, painful defecation or cyclic urinary symptoms. Extra pelvic endometriosis is relatively a rare condition and mainly found after gynecological surgery such as hysterectomy, caesarean section, laparoscopic procedures, episiotomy and very rarely amniocentesis[2]. However, abdominal wall endometriosis is to be found to increase due to the rapid increase of caesarean section rates.

The prevalence of abdominal wall endometriosis is reported to be around 0.03%-1.08% in women with previous history of gynecological or obstetrical surgery [3]. In one study the time interval between the surgery and the mass presentation was 3,6 years after the surgery [4]. However, there are some reports in the literature about spontaneous abdominal wall endometriosis with no previous history of any scars [4]. The pathogenesis of abdominal wall endometriosis can be explained by two possible mechanisms; either form direct implants of the endometrial implants during the procedure with proliferation



Journal of Clinical & Medical Case Reports

Moamar Al-Jefout*

Department of Obstetrics & Gynaecology, Mutah Medical Faculty, Mutah University, Jordan

Address for Correspondence

Moamar Al-Jefout, Department of Obstetrics & Gynaecology, Mutah Medical Faculty, Mutah University, Jordan; E-mail: drmoamar@yahoo.co.uk

Submission: 07 March 2013

Accepted: 18 April 2013

Published: 19 April 2013

under hormonal influence or from local metaplasia of the surrounding tissue to form endometrioma. The classical symptoms of abdominal wall endometriosis are a painful swelling and cyclic pains related to the menstrual period, but all of these symptoms are not always associated. Ultrasound in combination of clinical finding can be used to diagnose abdominal wall endometriosis [5]. The differential diagnosis is made with other lesions, such as hernias, post-operative ventral hernias, hematomas, granulomas, abscesses, and tumours [6] and this differential diagnosis may be difficult in most cases [7]. The standard way to treat these lesions is a wide excision of the mass with a 1 cm safe margin with or without patch grafting[8]. In recurrent cases a combination of surgical re-excision and postoperative adjuvant medical therapy is recommended [9].

Implanon (Organon International), is a single-rod long acting reversible hormonal contraceptive subdermal implant that is inserted just under the skin of a woman's upper arm. The 4 cm by 2 mm Implanon rod contains 68 milligrams of Etonogestrel which is released over a three year period. Peak serum etonogestrel concentrations have been found to reach 781–894 pg/mL in the first few weeks, gradually decreasing to 192–261 pg/mL after 1 year, 154–194 pg/mL after 2 years, and 156–177 pg/mL after 3 years, maintaining ovulation suppression and contraceptive efficacy.

The case: a 39year old (at the time of first consultation) multiparousJordanian woman. She underwent caesarean sectionthree years prior to first consultation. The patient attended my outpatient clinic complaining of cyclical abdominal wall pains associated with menstrual flow. During abdominal examination a well-defined mass was palpable 5 cm below the umbilicus 3 cm lateral to midline, measuring on 12 cm by 10cm. The mass was not tender and not mobile involving the sheath and underlying muscle. On trans-abdominal ultrasound scan a hypoechoic mass was confirmed measuring 12 by 10 cm and 3 cm depth. The patient gave history of 2 unsuccessful attempts of wide excision of the mass by surgeons with positive histopathology showing clear evidence of endometriosis. The pathology reports revealed microscopic finding consisting of endometrial glands and stroma scattered in fibro-collagenous scar tissues. After one year of the last surgical excision the mass reoccurred and the patient received two courses of GnRH agonist treatment for six month duration in each time with nosustainable improvements in the size or in pain symptoms.

Insertion of subdermal implant (Implanon[®]) was decided and performed after written consent of patient for its use as a novel option for the treatment of her condition. After 2 months pain symptoms were gradually decreased and finally subsided. The size of the mass slowly decreased and was evident on monthly clinical examinations and trans-abdominal ultrasound scans. After three months a substantial reduction in the size was noticed and pain symptoms completely vanished. A troublesome breakthrough bleeding occurred few months after the insertion and could only be managed by adding continuous oral progestogen (Provera 5 mg bd). In addition, a slight increase in weight was noticed and was managed by changing life style. The patient had a DXA (Dual X ray Absorptiometry) scan to exclude any side effects of long standing progestin therapy on her bone density; the scan was normal. After 3 years of follow up the mass is almost not palpable and the scan shows a small 2 by 3 cm endometrioma just beneath the rectus sheath very attached to the lower borders of the sheath. Because of the improvement in her quality of life (QoL) and decreasing mass size, another implant was inserted after three years which is in situ for the last 2 years. She is still on taking the provera 5 mg once daily and she is very satisfied with her management.

Discussion

This case report suggests that the use of subdermal etonogestrel implant may be an option for the treatment of difficult and recurrent cases of abdominal wall endometriosis refractory to standard surgical excision. In this case the patient received two progestogens one subdermal and later another oral progestogen. In my opinion the main therapeutic effect came from the implant as the mass started to shrink before starting the oral progestogens. Up to my knowledge this is the first case where such modality of treatment was used. However, it should be remembered; that the current gold standard of first line treatment for abdominal wall endometriosis should be a wide surgical excision and the proposed modality of treatment should be reserved for recurrent cases.

These cases usually present to surgeons, however, they might be underdiagnosed or missed [10] and a referral to a gynecologist is recommended in every case [11]. Moreover, the diagnosis of abdominal wall endometriosis should be included in the differential diagnosis of any abdominal wall mass after abdominal surgery [12].

Etonogestrel subdermal implants have been used as an additional treatment option in women with symptoms related to pelvic endometriosis [13,14]. These implants deliver a systematic and relatively steady dose of progestogens that have a therapeutic effect on the ectopic lesions either on their own or on combination with other progestogens.

References

1. Giudice LC, Evers JLH, Healy DL (2012) *Endometriosis: Science and Practice*. Wiley-Blackwell, USA.
2. Hughes ML, Bartholomew D, Paluzzi M (1997) Abdominal wall endometriosis after amniocentesis. A case report. *J Reprod Med* 42: 597-599.
3. Eljuga D, Klaric P, Bolanca I, Grbavac I, Kuna K (2012) Abdominal wall endometriosis: case report. *Acta Clin Croat* 51: 261-263.
4. Kang J, Baek JH, Lee WS, Cho TH, Lee JN, et al. (2013) Clinical manifestations of abdominal wall endometriosis: a single center experience. *Arch Gynecol Obstet* 287: 301-305.
5. Alexiadis G, Lambropoulou M, Deftereos S, Giatromanolaki A, Sivridis E, et al. (2001) Abdominal wall endometriosis--ultrasound research: a diagnostic problem. *Clin Exp Obstet Gynecol* 28: 121-122.
6. Rulli F, Pacella A (1998) Endometriosis of the abdominal wall. *Acta Biomed Ateneo Parmense* 69: 139-143.
7. Dumitrescu AS, Herold T (2011) Endometriosis of the abdominal wall: a difficult differential diagnosis. *Rofo* 183: 861-864.
8. Cheng NH, Zhu L, Lang JH, Liu ZF, Sun DW, et al. (2006) Repair of abdominal wall defect after resection of abdominal wall endometriosis. *Zhonghua Yi Xue Za Zhi* 86: 1919-1921.
9. Ding Y, Zhu J (2013) A retrospective review of abdominal wall endometriosis in Shanghai, China. *Int J Gynaecol Obstet* 121: 41-44.
10. Nirula R, Greaney GC (2000) Incisional endometriosis: an underappreciated diagnosis in general surgery. *J Am Coll Surg* 190: 404-407.
11. Singh KK, Lessells AM, Adam DJ, Jordan C, Miles WF, et al. (1995) Presentation of endometriosis to general surgeons: A 10-year experience. *Br J Surg* 82: 1349-1351.
12. Kocakusak A, Arpinar E, Arkan S, Demirbag N, Tarlaci A, et al. (2005) Abdominal Wall Endometriosis: A Diagnostic Dilemma for Surgeons. *Med Princ Pract* 14: 434-437.
13. Al-Jefout M, Palmer J, Fraser IS (2007) Simultaneous use of a levonorgestrel intrauterine system and an etonogestrel subdermal implant for debilitating adolescent endometriosis. *Aust N Z J Obstet Gynaecol* 47: 247-249.
14. Yisa SB, Okenwa AA, Husemeyer RP (2005) Treatment of pelvic endometriosis with etonogestrel subdermal implant (Implanon). *J Fam Plann Reprod Health Care* 31: 67-70.
15. Francica G (2012) Reliable clinical and sonographic findings in the diagnosis of abdominal wall endometriosis near cesarean section scar. *World J Radiol* 4: 135-140.
16. Hensen JH, Van Breda Vriesman AC, Puylaert JB (2006) Abdominal wall endometriosis: clinical presentation and imaging features with emphasis on sonography. *AJR Am J Roentgenol* 186: 616-620.
17. Zhao R, Wang XJ, Song KX, Zhu L, Li B (2012) Mini-abdominoplasty combined with mesh used for abdominal wall endometriosis. *Chin Med J (Engl)* 125: 1614-1617.