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ACUPUNCTURE AS TREATMENT OPTION FOR DYSMENORRHEA AND ACUTE PELVIC PAIN IN PATIENT WITH ENDOMETRIOSIS: A CASE REPORT

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Case report

Key words: acupuncture, endometriosis, pelvic pain, dysmenorrhoe

SUMMARY. Endometriosis is a common chronic gynaecologic disorder of still unknown origin. It affects up to 10% of women of child-bearing age. Although the condition may be asymptomatic, common symptoms include dysmenorrhoea, dyspareunia, non-cycle pelvic and abdominal pain, and subfertility. Endometriosis has great impact on well-being and quality of life with diminished physical, emotional and social aspects of women's life. There is an increased interest in use of acupuncture treatment as noninvasive, efficient and safe therapeutic option in the management of patients with pelvic pain and dysmenorrhoea due to endometriosis. Acupuncture can provide relief from the pain by local and central stimulation of the nervous system. This results in the release of endorphins and other neurohumoral factors in the hypothalamus and during transmission of the impulse through the neural axis, to change the threshold and experience of pain in the spinal cord and various parts of the brain, including emotional limb nucleus and reverse inhibitory sensory pathways, and further to regulate the inflammation process by promoting immunomodulatory effects with secretion of different biochemical factors. The aim of the article is to present patient with severe acute pelvic pain and chronic dysmenorrhoe due to endometriosis who was successfully treated with acupuncture.

Introduction

Endometriosis is a chronic gynecologic disease affecting up to 10% of the women and a major cause of chronic pelvic pain, dysmenorrhoea, dyspareunia, and infertility in reproductive-age women (1). It not only affects health, well-being and quality of life, but has also great impact on daily life activities, work disabilities and health care consumption (1,2).

It is characterized by the implantation of functional endometrial tissue at ectopic positions generally within the peritoneum (3,4). Several mechanisms are involved in endometriosis development: anatomical and mechanical changes, hormonal, immune or inflammatory factors (5).

Mechanisms underlie endometriosis-associated pain including nociception, inflammation, and alterations in peripheral and central nervous system pain processing (6–8). As also occurring in other chronic conditions, pain in endometriosis is often associated with psychological distress and fatigue, both of which may amplify pain (9).

Current analgesic, anti-inflammatory, surgical and hormonal treatment modalities of endometriosis remain unsatisfactory. Cochrane analysis have shown that for women with pain and endometriosis, suppression of menstrual cycles with gonadotrophin-releasing hormone (GnRH) analogues, the levonorgestrel-releasing intrauterine system (LNG-IUD) and danazol were beneficial interventions. Laparoscopic treatment of endometriosis and excision of endometrioma were also associated with improvements in pain. The evidence on NSAIDs (non steroid antiinflammatory drugs) efficacy in treatment of endometriosis was inconclusive. However, the management of chronic pelvic pain is still

challenging. Despite interventions which include surgery, many women remain in pain without a firm gynaecological diagnosis (10). Furthermore, for many women current management options for endometriosis are often inadequate and ineffective, with side effects. In those patients acupuncture techniques could be an alternative option (10).

Non-pharmacological treatment strategies based on sensory stimulation which includes different types of acupuncture, could serve as a complementary alternative (11–12).

The pain-alleviating effects induced by acupuncture have been attributed to interaction between provoked nociceptive impulses and somato-visceral reflexes, deactivation of brain areas in transmitting sensations of pain-related unpleasantness, and different physiological and psychological processes such as activation of endogenous descending pain inhibitory systems with promoting sedation effect (13–14). All was conducted with influence on production of the body's communication substances-hormones and neurotransmitters as a method that induces the expectation of symptom relief (15).

The aim of the article is to present patient who had benefit of treatment pain related to endometriosis with acupuncture.

Case presentation

A 40-yr nullipareous with dysmenorrhoea and acute pelvic pain due to endometriosis is frequently used NSAIR for symptoms relief. At regular check up, ultrasound exam established ovarian bilateral endometriosis. Due to symptoms and ultrasound finding, she underwent laparoscopic surgery. Bilateral removal of ovarian

endometriotic cysts and resolution of adhesions were performed. After surgery, she was included into IVF (in vitro fertilization) procedure. During this time, pelvic pain has been restored so she was taken second laparoscopic surgery procedure with adhesions resolution. After surgery, two unsuccessful pregnancies (missed abortion at 8 and 10 weeks) were achieved after IVF procedure. Due to continuous moderate pelvic pain, dysmenorrhea, dyspareunia, irregular menstrual cycles as well as loss of energy, mood and depression, she was recommended to start with micronutrition and acupuncture.

Laboratory findings before starting treatment with acupuncture include hormones and tumor markers determination: AMH less than 0,19 pmol/L; LH 20,7 iu/l; FSH 37,8 iu/L; progesterone 0,64 nmol/L; TSH 0,92mIU/L; fT3 4,19mIU/L; fT4 15,33 mIU/L; anti TG-AT 21,96 mIU/L; prolactin 289 mIU/L; CA 125 8,47; kIU/L CA 19–9 4,68 kIU/L.

Acupuncture was performed in two cycles for two months in order to relieve acute pelvic pain and chronic dysmenorrhoe with cosequent sedation. Treatment was performed two times per week for 25 minutes. Sterile, disposable stainless-steel needles were used (25x22 mm, 18x13mm and 16x10mm) for treatment. If needles are properly applied they cause sensation of soreness, numbness or distension with redness around treatment points during initial insertion. Selection and number of acupuncture points depends on the currently present disturbances. Recommended point for first cycle treatment were: CV3, Sp6, Sp8 or Sp9, K3, G 36, H3, DM 20 and ear point shen men, uterus, endocrine, kidney, liver, spleen. After ten treatments the patient had regular menstrual cycle, no pelvic pain and dysmenorrhoea and good general psycho-physical status. Two months after first cycle we performed second cycle due to slight premenstrual disturbances and mild pelvic pain only before menstruation. We used BI 18, DM 20, CV 17, CV 3, Pc 6, H 13, Sp 6, Sp 8 and ear point shen men, pelvis, brain, liver, anxiety points as recommended points. Four months after the beginning of acupuncture treatment, participants did not reported suffering of any side effects from their treatments and she had no pelvic pain, dysmenorrhoe with good mental and physical condition.

Ultrasound examination found no endometriotic cysts in both ovaries. Laboratory findings after treatment have shown significantly lower levels of FSH 21,22 IU/L; LH 14,33 IU/L and progesteron 1,07 nmol/L compared to initial values. After the results she was decided to try new IVF cycle.

Discussion

Endometriosis is a common cause of pelvic pain in women and pain is often the cause of disability (3,6). Medical treatment does not always provide complete pain relief and some women fail to respond at all (16).

Symptom recurrence is also common following medical treatment (19). Clinical experience has shown that some women fail to respond to surgical treatment either because of incomplete excision or postoperative disease recurrence or because some of their pain was not due to endometriosis in the first place and this may suggest another source of pain, such as the uterus (adenomyosis), bladder (interstitial cystitis) or musculoskeletal causes (pelvic floor muscle spasm) (6–7,17–18). Treatment must be individualized, using diagnostic tools that will allow us to identify the mechanisms of pain in an individual patient and provide appropriate therapy with a multidisciplinary approach with use of adjunctive treatments (2,7,19–20).

There is preliminary evidence to support acupuncture as an effective treatment for endometriosis, with one small controlled trial (21) and a few comparative studies against Western medications (22–24), though further research is needed to confirm it.

It has been shown that acupuncture treatment may specifically be of benefit in people with endometriosis by:

- providing pain relief – by stimulating nerves located in muscles and other tissues, acupuncture leads to release of endorphins and other neurohumoral factors, and changes the processing of pain in the brain and spinal cord (14,25–27)
- reducing inflammation – by promoting release of vascular and immunomodulatory factors (28–29)
- regulating levels of prostaglandins (15)
- combining acupuncture with Chinese herbal medicine for endometriosis has been shown in animal studies to down-regulate the abnormal increase of matrix metalloproteinase-2 (MMP-2) levels that is associated with ectopic activity of endometrial cells. The treated rats had reduced areas of ectopic tissue (30) MMP-2 is required for the anchoring of the placenta to the uterine wall in pregnancy but over-production can lead to endometriosis.

In this case report we presented successfully results of acupuncture treatment in patient with severe acute pelvic pain and chronic dysmenorrhoe due to endometriosis in state of mental changes. We perceived a beneficial effect on quality of life with good general psycho-physical condition and most important without any kind of pain. Finally it was noticed reduced size of endometriotic cysts with lowering the surrounding blood flow.

Conclusions

The evidence to support the effectiveness of acupuncture for pain in endometriosis is limited. This paper highlights the necessity for developing future studies that are well-designed, double-blinded, randomised controlled trials that assess various types of acupuncture options in comparison to conventional therapies.

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AKUPUNKTURA KAO OPCIJA ZA LIJEČENJE DISMENOREJE I AKUTNE ZDJEČIČNE BOLI U PACIJENTICA S ENDOMETRIOZOM: PRIKAZ SLUČAJA

*Nataša Šemnički¹, Marina Šprem Goldštajn²**Prikaz slučaja**Ključne riječi:* akupunktura, endometrioza, bol u zdjelici, dismenoreja

SAŽETAK. Endometrioza je čest kronični ginekološki poremećaj još uvijek nedovoljno poznate etiologije koji utječe na do 10% žena u reproduktivnoj dobi. Iako stanje može biti asimptomatsko, uobičajeni simptomi uključuju dismenoreju, dispareuniju, bol u trbuhu nevezana za menstrualni ciklus i bol u abdomenu, te subfertilnost. To ima velik utjecaj na dobrobit i kvalitetu života s smanjenim fizičkim, emocionalnim i društvenim aspektima ženskog života. Postoji sve veći interes za korištenje akupunkture kao neinvazivne, učinkovite i sigurne terapijske metode u pomaganju bolesnicima s bolovima u zdjelici i dismenoreju zbog endometrioze. Postoji dokaz da akupunktura može pružiti olakšanje boli lokalnom i centralnom stimulacijom živčanog sustava. To dovodi do oslobađanja endorfina i drugih neurohumoralnih čimbenika u hipotalamusu i tijekom prijenosa impulsa kroz neuralnu osovinu, za promjenu praga i doživljaja boli u kralježničnoj moždini i različitim dijelovima mozga, uključujući i emotivne limbičke jezgre te povratne inhibitorne osjetilne putove, uz dodatno reguliranje procesa upale promicanjem imunomodulatornih učinaka uz lučenja različitih biokemijskih čimbenika. Cilj članka je predstaviti bolesnicu s teškom akutnom boli zdjelice i kroničnom dismenorom uzrokovane endometriozom koja je uspješno liječena akupunkturom.