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The complementary treatment of endometriosis: diet, physiotherapy and psychological treatment

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ABSTRACT

Endometriosis still remains the second most common disease in women of the reproductive period; it occurs in 5–30% of them, including 50% of infertile women and 30% of women with chronic pain in the smaller pelvis. The latest epidemiological data indicating on the increase in the percentage of endometriosis in adolescents (2–5%) and postmenopausal women (3-6%), which is worrying[1]. Diagnostics is the greatest problem of this disease because there is no unambiguous blood test which can confirm endometriosis. Moreover, changes are difficult to detect even in imaging examinations, especially in less advanced cases. All of this contributes to delaying diagnosis by up to 10 years. However, there are more and more complementary treatments that can significantly improve the quality of life and reduce the pain.

KEY WORDS: endometriosis, complementary treatment, diet, physiotherapy, psychological treatment

INTRODUCTION

Endometriosis is a disease characterized by the presence of tissue resembling endometrium (the lining of the uterus) outside the uterus. It causes a chronic inflammatory reaction that may result in the formation of scar tissue (adhesions, fibrosis) within the pelvis and other parts of the body [2]. This illness manifests itself in pelvic symptoms such as: painful periods, heavy menstrual bleeding, painful ovulation, irregular menstrual cycles, chronic pelvic pain, pain during and/or after sexual intercourse, infertility and also symptoms. Additionally, other symptoms may occur: painful bowel movements, painful urination, fatigue, depression or anxiety, abdominal bloating and nausea.

The correlation between the stage of endometriosis and intensity of pain symptoms not always has to be proportionate. Laparoscopy can be perceived as a standard procedure in endometriosis diagnostics as it allows simultaneous treatment. Profound interview as well as visual diagnostics (USG, MRI) should precede laparoscopy [3].

In young women who plan pregnancy, the endoscopic method with hormonal treatment is used whenever possible. There are times when complete surgical treatment of endometriosis must be used, consisting in complete hysterectomy with appendages. This method is used in extensive cases and nodular lesions of both gonads, who do not plan offspring but suffer from significant ailments [4].

DIET

It has been observed that overproduction of prostaglandin F₂ (PGF₂) is the causative agent of the strong pain associated with the phenomenon of dysmenorrhea (painful periods or menstrual cramps) [5]. By following a proper daily diet, you can provide your body with a large amount of fats rich into omega-3 acids, which are the source for the synthesis of PGE₁ and lower your intake of stimulating fatty acids production of PGF₂, which is saturated fats - butter, meat, offal, lard and bacon [6].

The recommended diet for women suffering from endometriosis is an antioxidant diet because they have vitamin deficiencies, especially vitamins C and E. A diet rich in antioxidants consists of vegetables and fruits: legumes, red and orange vegetables and fruits such as: cauliflower, broccoli, Brussels sprouts, spinach, grapes, chokeberry, black elderberry, strawberries, apples, oranges, blueberries, tomatoes, beets, green tea, vegetable oils, milk and milk products, fatty fish, spices and herbs (cinnamon, oregano, curry), whole grains, nuts and seeds. A proper diet allows to increase the activity of antioxidant enzymes and reduce the concentration of oxidative stress markers. In a study by Nalini Santanam [7] supply of antioxidants has been shown to reduce chronic pelvic pain in women with endometriosis and inflammatory markers in the peritoneal fluid.

	Superoxide Dismutase (U/mL)		Glutathione Peroxidase (nmol/min/mL)		Malondialdehyde (μM/L)		Lipid Hydroperoxides (μM/L)	
	Control	HAD	Control	HAD	Control	HAD	Control	HAD
Basal	3.9 ± 1.6	4.0 ± 1.1	1031.1 ± 114.2	1033.6 ± 108.6	31.6 ± 5.4	31.1 ± 4.7	12.3 ± 2.2	12.1 ± 3.3
1 st month	3.8 ± 2.0	4.8 ± 1.3 [#]	1078.7 ± 119.9	1078.3 ± 105.2	30.6 ± 5.2	30.9 ± 4.2	11.9 ± 2.3	11.4 ± 3.2
2 nd month	4.1 ± 1.2	5.6 ± 1.8 ^{*#}	1066.8 ± 112.2	1106.6 ± 121.7	30.4 ± 4.9	28.7 ± 4.0	11.7 ± 2.8	11.0 ± 2.9
3 rd month	3.9 ± 1.5	6.1 ± 2.0 ^{*#}	1081.9 ± 108.0	1300.5 ± 111.7 ^{*#}	31.3 ± 4.7	25.2 ± 2.3 ^{*#}	11.5 ± 2.4	9.6 ± 2.2 ^{*#}
4 th month	3.8 ± 1.4	9.2 ± 3.2 ^{*#}	1076.6 ± 118.8	1564.3 ± 137.3 ^{*#}	30.9 ± 3.2	23.0 ± 2.3 ^{*&}	11.8 ± 2.1	8.2 ± 1.9 ^{*#}

Data are means ± SD. * Friedman Repeated Measures Analysis of Variance on Ranks (Dunn's post hoc test) for comparisons in the control and HAD groups (basal vs. all months). [#] Mann-Whitney U-Rank Sum test for comparisons in basal and every month concentrations between the control and HAD groups. *P* < 0.05 in all cases.

Antioxidant enzyme activity and oxidative stress markers in the control and HAD groups [8].

PHYSIOTHERAPY

Physiotherapy activities are aimed at restoring the functions of soft tissues and organs in the pelvic floor area, as well as improving the elasticity of scars and adjacent structures. This area also focuses on re-education in the field of muscle tone, movement patterns and neuromuscular coordination. The patients suffer from severe pain, they experience muscle contractions, adhesions, and disturbances in movement patterns. One of the most popular method is manual therapy because it works through combating pain and improving the flexibility and regulation of muscle tone. The therapy is aimed at improving joint mobility, restoring normal tissue glides and improving neuromuscular coordination. The therapy focuses on the lumbar-pelvic region, where the therapist works on the mobility of individual motor segments, symmetry, and the correct positioning of the pelvis in relation to the spine.

Pelvic floor muscle training, in the case of endometriosis, is aimed at reducing the muscle tone and relaxing the muscles (endometriosis increases the tension and contracture). The training performed is known as the reverse training of the pelvic floor muscles and includes relaxation exercises that are performed in conjunction with deep breathing and high concentration [9].

PSYCHOLOGICAL SPHERE

Most women with endometriosis also suffer from psychological problems that can be caused by many different factors. Endometriosis is one of the most common causes of infertility resulting in constant attempts to get pregnant, possible miscarriages, complex and long-term hormonal treatment, mood swings, frequent visits to the doctor [10]. All this is accompanied by a feeling of not fulfilling the social role of a mother comparing ourselves to peers who have already managed to reach the stage of motherhood.

However, infertility is not the only problem that affects the psyche. Patients often suffer from depression, anxiety attacks and other psychological diseases because their quality of life is significantly reduced [11]. It is definitely influenced by the symptoms accompanying the patient, such as chronic pelvic pain, headaches, lower back pains, urinary (dysuria, polyuria) and gastric problems. Heavy menstruation often contribute to the development of anemia and iron deficiency which may cause many other symptoms (weakness, drowsiness, fainting).

Another significant problem concerns the sexual sphere, hormone treatment often lowers libido. On the other hand, pain during intercourse (dyspareunia) may worsen over time without proper

treatment. Unfortunately, many women are ashamed to talk about it and report this problem to a doctor, which also begins to affect the mental sphere. Patient unconsciously knows that sexual intercourse will be associated with the pain, therefore, fear of intercourse may develop and this can cause problems or breakups in the relationship.

In conclusion, endometriosis greatly affects the mental sphere and its treatment should not be avoided. Patients should be offered meetings with a psychologist or psychotherapy, and if necessary introduce the pharmacological treatment.

SUMMARY

Endometriosis is a very complex disease that affects many others besides the reproductive system. The main treatment is pharmacological treatment: combined pills, gonadotropin releasing hormone (GnRH) agonist, progestogenes [12] and surgical treatment, such as laparoscopic removal of lesions, however, this may not be enough. This treatment often does not eliminate all the symptoms and then complementary therapy is helpful. The proper diet contributes to the reduction of inflammation, increased muscle tension and muscle contractions can be managed by various physiotherapeutic techniques. In turn, most of psychological problems can be solved in cooperation with a psychologist or psychotherapist. All these types of therapy can reduce or eliminate many symptoms, including pain and improve the quality of life. Notwithstanding, remember that these are complementary therapies and you should not give up or omit basic therapy in favor of them.

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