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A Multidisciplinary Approach: Integrating Physiotherapy in the Management of Endometrioma

Review Article

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Abstract

Endometrioma is a gynaecological illness that is difficult to diagnose and treat. It is a subtype of endometriosis. Ovarian cysts with endometrial-like tissue are its defining feature, and it frequently leads to infertility, chronic pelvic pain, and a lower quality of life. Although the cornerstones of treatment are surgery and medication, the benefits of interdisciplinary approaches are becoming increasingly apparent. The potential of physical therapy to reduce symptoms, increase functionality, and improve general well-being is highlighted in this article's exploration of its incorporation into the all-encompassing management of endometrioma.

Keywords: Endometrioma; Infertility; Physiotherapy

Introduction

An ovarian cyst known as an endometrioma is caused by endometriosis, a persistent illness in which tissue resembling endometrium grows outside the uterus.These cysts, which include tissue debris and old blood, are frequently called **"chocolate cysts"** because of their appearance. Women of reproductive age are most likely to have them, and they can cause symptoms including pelvic pain, infertility, dyspareunia (pain during sexual activity), dysmenorrhea (painful menstruation), and chronic exhaustion [1,2]. This affecting approximately 10% of reproductive-age women and girls globally.According to a study that examined women who visited gynaecological clinics, endometrioma's were found in 20.9% of instances.[3,4] There is limited data when looking specifically at the prevalence of endometriomas. However, it is estimated that 17 to 44% of women with endometriosis experience an endometrioma.13, 14and 28% of these women will have bilateral endometriomas. 15Endometriosis has been found in nearly 50% of women experiencing issues with infertility and nearly 70% of women with pelvic pain.1,12 Endometrioma is often treated with hormonal medications and surgery, but supportive therapies including physical therapy are becoming more well-known for their ability to reduce symptoms and enhance quality of life. Because physiotherapy targets the physical components of endometriosis-related pain and dysfunction, it can be used in conjunction with medicinal treatments[5, 6].According to Busacca and Vignali (2003), endometriomas are associated with infertility because they interfere with ovulation, implantation, and ovarian reserve.[7] Although there is a chance of decreased ovarian reserve, surgical treatment may increase fertility [8] . This article examines how physiotherapy can be incorporated into endometrioma treatment, emphasizing how it can reduce symptoms, increase function, and improve general health.

Endometrioma's Impact on Fertility

1. Reduced ovarian reserve:

- Healthy ovarian tissue can be destroyed by endometrioma's,

which lowers the quantity and caliber of eggs that can be fertilized. The ovarian microenvironment may be harmed by endometrioma-related chronic inflammation and oxidative stress, which would further reduce the ovarian reserve.

- Although endometrioma removal surgery may be required, it may unintentionally harm the ovarian cortex, which houses the follicles (egg sacs).

1. Inflammation:

- Increased peritoneal inflammation is linked to endometriosis.
- The inflammatory environment may affect fertilization, embryo implantation, and gamete quality.

2. Anatomical distortion:

- Large endometrioma's can alter the structure of the pelvis, making it more difficult for the ovaries and fallopian tubes to move freely, which lower the likelihood of a spontaneous conception. [9,10]

Prodrome's of endometrioma

- Pelvic pain.
- Hyper menorrhea.
- Menstrual Pains.
- Back pain.
- Dyspareunia
- Dyschezia(Painful defecation)
- Painful urination (dysuria)
- Urinary frequency.
- Vomiting/Nausea.
- Infertility.
- Bloating.[11]

Chronic Inflammation in Endometriomas

Ectopic endometrial-like tissue associated with endometriomas causes a persistent inflammatory response. Inflammatory mediators such cytokines, interleukins, and tumor necrosis factor-alpha (TNF-α) are released when this tissue in the ovaries bleeds cyclically, forming cysts. The development of the disease is sustained by this inflammatory milieu.[16]

Mechanisms of Endometrioma Pain

Multiple overlapping pathways contribute to endometrioma pain.

1. Peripheral Sensitization

Neuroangiogenesis or the development of nerves into lesions, and pro-inflammatory cytokines make peripheral nerve endings more sensitive, which intensifies pain perception.

2. **Central Sensitization**

Prolonged activation of pain pathways results in increased reactions from the central nervous system, which intensifies pain in response to little stimuli.

3. **Neurogenic Inflammation**

Neuron fibres and inflammatory cells interact to sustain an inflammatory and pain cycle.[17]

Effects of endometrioma on the musculoskeletal system

Pelvic Floor Dysfunction

Endometrioma-related chronic pelvic pain can result in pelvic floor dysfunction (PFD).This condition is characterized by hypertonic or imbalanced pelvic floor muscles, which may result in:

- Pain during intercourse (dyspareunia)
- Bladder and bowel issues (e.g., urinary urgency, constipation)
- Generalized pelvic discomfort.The chronic inflammation and pain associated with endometriomas contribute to the tightening and dysfunction of the pelvic floor muscles. [18]

Decreased Mobility

Additionally, endometriomas may result in decreased mobility and functional deficits because of:

- Persistent inflammation-induced musculoskeletal dysfunction
- Chronic discomfort that restricts physical activity.Research has shown that people with endometriosis have decreased physical performance, including decreased lower limb strength, grip strength, and general mobility.[19]

Management of endometrioma

Endometriomatreatment plans are based on patient age, fertility objectives, cyst size, and symptoms. Techniques for preserving fertility, medicinal therapy, and surgery are available forms of treatment. Optimizing symptom alleviation, preventing recurrence, and maintaining reproductive potential all require a comprehensive approach.A multidisciplinary approach is a cooperative approach to healthcare in which experts from different fields collaborate to treat a medical condition holistically. The illness has a substantial effect on social, emotional, and physical health, highlighting the necessity of comprehensive treatment. When treating diseases like endometriosis and the problems it causes with fertility, gynaecologists, physiotherapists, dieticians, psychologists, and fertility specialists are frequently part of a multidisciplinary team. In order to reduce symptoms and slow the evolution of the disease, hormone therapy and pain management are the main medical interventions for endometriomas. Endometriosis progression is slowed down and ovarian function is successfully suppressed by

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combined oral contraceptives (COCs) (Vercellini et al., 2011). According to Strowitzki et al. (2010), progestin's such dienogest and medroxyprogesterone assist reduce related symptoms by preventing the formation of ectopic endometrial tissue. By inhibiting the production of oestrogen, gonadotropin-releasing hormone (GnRH) agonists and antagonists reduce the size of lesions (Olive &Pritts, 2001). When traditional therapies are unsuccessful in refractory situations, aromatase inhibitors may be taken into consideration (Chura et al., 2009). According to Parazzini et al. (2010), non-steroidal anti-inflammatory medications (NSAIDs) are frequently used to treat pain and improve symptoms. The integrated strategy seeks to enhance quality of life and manage symptoms.Large cysts (>4–5 cm) that provide a danger of ovarian damage or cancer, individuals with severe discomfort that is not relieved by medication, or patients who are concerned about preserving their fertility are usually candidates for surgical care (Chapron et al., 2002). Laparoscopic cystectomy, which removes the cyst while leaving ovarian tissue intact, is the recommended surgical method because it is linked to superior results (Beretta et al., 1998). Alternatively, ablation or coagulation can be performed, though these methods have higher recurrence rates (Hart et al., 2008). Oophorectomy may be required to relieve symptoms and stop additional problems in severe or recurring cases (Busacca et al., 2006).When treating ovarian cysts, fertility issues are quite important, especially for women who are of reproductive age? Laparoscopic cystectomy is an example of conservative surgery that is recommended because it maintains ovarian tissue and greatly enhances reproductive outcomes (Somigliana et al., 2006). To increase the likelihood of becoming pregnant, assisted reproductive technologies like in vitro fertilization (IVF) may be suggested for patients who have trouble conceiving spontaneously after surgery (Brosens et al., 2003).To provide the best possible recovery and avoid recurrence, post-operative treatment is crucial. Hormonal medication is frequently used to lower the risk of recurrence following surgery, such as progestin's or combined oral contraceptives (COCs) (Vercellini et al., 2008). Furthermore, routine ultrasonography monitoring is advised to identify any possible problems or indications of recurrence so that prompt action can be taken if required (Muzii et al., 2005). By using these techniques, the necessity for additional surgical treatments is reduced and long-term results are maintained.Managing the symptoms of ovarian cysts might be aided by lifestyle changes and complementary therapies. Diets high in anti-inflammatory foods and regular exercise have been demonstrated to help lower pain and enhance general wellbeing (Parazzini et al., 2017). Though there is still little proof of their efficacy, alternative therapies like yoga and acupuncture may also provide symptom relief, especially for pain and stress reduction (Waylonis et al., 1991). To improve quality of life, these strategies might be taken into consideration in addition to traditional treatments.[10, 15,20,21,22,23,24,25]

Physiotherapy interventions in managing endometrioma

Endometrioma management may benefit from physiotherapy therapies, especially when it comes to pain management, increasing pelvic floor function, and improving mobility. Myofascial release, therapeutic exercise, posture training, and other pelvic floor physical therapy approaches can help improve pelvic pain and ease endometriosis-related muscular tension (Meyer et al., 2015). Deep abdominal strengthening exercises and manual treatment can also enhance core stability and lessen discomfort during day-to-day activities (Baker et al., 2017). According to Vermunt et al. (2015), physiotherapists may use bladder training and biofeedback to improve pelvic function in patients with related bowel or urine complaints. Despite not being the main treatment for endometriomas, physical therapy can greatly improve quality of life and help control symptoms.[26, 27,28]

Recent advancements in physiotherapy for managing endometriomas have focused on integrating various therapeutic modalities to alleviate symptoms and enhance quality of life. Pelvic health physiotherapy has emerged as an effective, evidence-based treatment for symptoms such as pain during sexual activity. This approach includes pain education, individualized exercise and stretching programsbreathe work, relaxation techniques, and gentle hands-on treatments targeting pelvic floor muscles. A registered physiotherapist trained in pelvic health can address issues impacting muscles, joints, and tissues in and around the pelvis and abdomen. Additionally, a comprehensive multimodal approach to pelvic pain management has been advocated, encompassing medical, surgical, and holistic therapies. This strategy emphasizes the importance of personalized treatment plans that integrate physiotherapy interventions to effectively manage endometriosis-associated pain. Furthermore, physiotherapy interventions such as kinesiotherapy, manual therapy—including visceral therapy—and physical therapy modalities like spa treatments, balneotherapy, and hydrotherapy have been identified as valuable adjuncts in the treatment of endometriosis. These therapies aim to reduce inflammation, alleviate pain, and significantly improve women's quality of life. In summary, recent advancements in physiotherapy for managing endometriomas emphasize a holistic, individualized approach that combines various therapeutic modalities to effectively address symptoms and improve patient outcomes.[26, 28, 29]

Several crucial measures must be taken in order to include physical therapy into clinical practice for the management of endometriomas. First, in order to create a customized treatment plan that meets each patient's needs, a comprehensive evaluation of their symptoms is necessary (Endometriosis Foundation of America, 2023). It is imperative that patients and healthcare providers have open lines of communication and receive education regarding the significance of physical therapy in symptom management and quality of life (Endometriosis Network, 2023). A customized physical therapy regimen that includes stretching, posture correction, myofascial release, and pelvic floor exercises should be created and modified in response to the patient's development (Baker et al., 2017). According to Vermunt et al. (2015), cooperation with various medical professionals, including gynaecologists and pain specialists, is required to guarantee a comprehensive approach to treatment. To measure development and maximize results, it's critical to regularly monitor and modify the physiotherapy program (Meyer et al., 2015). Although there is currently little data to support their efficacy, complementary therapies like yoga and acupuncture may also be used to help with symptoms (Waylonis et al., 1991). Last but not least,

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physiotherapists should pursue on-going professional development to be current with the most recent evidence-based procedures for treating endometriomas (Jin et al., 2020). This comprehensive strategy guarantees efficient symptom treatment and raises patients' general quality of life.[5, 28, 31,32,33,34]

Training and awareness for physiotherapists and gynaecologists in managing endometriomas are critical for providing optimal care to patients. For physiotherapists, specialized training in pelvic health physiotherapy is necessary to effectively manage endometriosis-related symptoms, including pelvic pain, urinary and bowel dysfunction, and musculoskeletal issues. Physiotherapists should be educated on the latest evidence-based practices for endometriosis management, including techniques like myofascial release, pelvic floor rehabilitation, and postural correction (Baker et al., 2017). Integrating these techniques into clinical practice requires comprehensive training programs, which should be part of on-going professional development. Such training ensures that physiotherapists can provide individualized treatment plans for patients and work collaboratively with other healthcare providers (Vermunt et al., 2015).

For gynaecologists, awareness of the broader role of physiotherapy in managing endometriomas is equally important. While gynaecologists are primarily responsible for diagnosing and treating endometriomas, they should be knowledgeable about the benefits of physiotherapy as part of a multidisciplinary approach. Training in recognizing the symptoms of endometriosis and understanding when to refer patients to physiotherapists can significantly improve patient outcomes. Gynaecologists should also be informed about the different types of physiotherapy interventions available, such as pelvic floor therapy and manual techniques, to guide appropriate referrals (Meyer et al., 2015). Additionally, gynaecologists should be trained in addressing the emotional and psychological aspects of managing chronic pain, as this plays a critical role in the overall well-being of patients with endometriosis (Waylonis et al., 1991).

Collaborative workshops and seminars involving both physiotherapists and gynaecologists are essential for fostering interdisciplinary understanding and communication. These educational initiatives should focus on the latest research regarding endometriomas, including updates on surgical management, conservative treatments, and complementary therapies (Jin et al., 2020). Additionally, developing case-based learning modules can help both physiotherapists and gynaecologists better understand how to integrate physiotherapy into clinical practice, ensuring comprehensive care for patients. By improving training and awareness, both professionals can work together more effectively to manage endometriomas and improve patient outcomes [5,31,32,33,34]. To overcome barriers in managing endometriomas, training for healthcare providers should focus on the latest diagnostic techniques and collaborative care, including physiotherapy (Baker et al., 2017). Early diagnosis and streamlined referral systems are crucial for timely intervention (Vermunt et al., 2015). Promoting multidisciplinary collaboration among gynaecologists, physiotherapists, and pain specialists can improve patient outcomes (Meyer et al., 2015). Public awareness campaigns should educate patients on the benefits of physiotherapy in managing endometriomas (Waylonis et al., 1991). Advocacy for policy changes and increased research funding will help integrate non-surgical interventions (Jin et al., 2020). Addressing psychological barriers through mental health support is also essential. [5, 32, 34]

Conclusion

By addressing the complicated nature of the ailment, a multidisciplinary approach to managing endometriomas that involves gynaecologists, physiotherapists, pain experts, and mental health practitioners delivers considerable benefits. With the help of physical techniques, medicinal treatments, and psychological support, this collaborative model guarantees that patients receive comprehensive care that improves their quality of life and symptoms. Physiotherapy, with its emphasis on mobility, pain management, and pelvic health, is essential to this strategy; nevertheless, further study is required to confirm its significance in treating endometriomas. In order to further understand its efficacy, improve treatment plans, and promote its inclusion as a routine component of endometrioma patient care, more research is needed.

References

1. Eskenazi B, Warner ML (1997) Epidemiology of endometriosis Obstet Gynecol Clin North Am 24: 235-258.
2. Somigliana E, Infantino M, Benedetti F, Arnoldi M, Calanna G, et al. (2006) The presence of ovarian endometriomas is associated with a reduced responsiveness to gonadotropins Fertil Steril86: 192-196.
3. Endometriosis (2023)
4. Prevalence in Clinical Settings: "Endometriomas in gynecological clinics" - Wiley Online Library.
5. Waylonis GW, Wilke WS (1999) Chronic pelvic pain: Diagnosis, management, and rehabilitation. Rheumatic Disease Clinics of North America 25: 179-194
6. Fitzgerald CM, otarinos RK (2003) Rehabilitation of pelvic floor dysfunction in women with chronic pelvic pain. Journal of Obstetric, Gynecologic Neonatal Nursing 32: 289-297.
7. Busacca M, Vignali M (2003) Endometrioma excision and ovarian reserve: a dangerous relation. J Minim Invasive Gynecol 10: 142-148.
8. Somigliana E, Vigano P, Filippi F, Papaleo P, Benaglia L, et al. (2012) Fertility preservation in women with endometriosis. ClinObstetGynecol 30: 1280-1286.
9. Allaire C, Bedaiwy MA, Young PJ (2023) "The diagnosis and management of endometriosis CmAJ 195: E363-E371.
10. Chapron C, Santulli P, de Ziegler D, Noel JC, Anaf V, et al. (2019) "Ovarian endometrioma: severe pelvic pain is associated with deeply infiltrating endometriosis." Human Reproduction 34: 398-409
11. Hansen KE, Kesmodel US, Baldursson EB, Kold M, Forman A (2014) Visceral syndrome in endometriosis patients. Eur J Obstet Gynecol Reprod Biol 179: 198-203.
12. Laufer MR, Goitein L, Bush M, Cramer DW, Emans SJ (1997) Prevalence of endometriosis in adolescent girls with chronic pelvic pain not responding to conventional therapy. J PediatrAdolesc Gynecol 10: 199-202.
13. Jenkins S, Olive DL, Haney AF (1986) Endometriosis: pathogenetic implications of the anatomic distribution. Obstet Gynecol 67: 335-338.
14. Redwine DB (1999) Ovarian endometriosis: a marker for more extensive pelvic and intestinal disease. FertilSteril 72: 310-315.
15. Vercellini P, Aimi G, De Giorgi O, Maddalena S, Carinelli S, et al. (1998) Is

Citation: Kusuma K, Kumari KS, Deepika D. A Multidisciplinary Approach: Integrating Physiotherapy in the Management of Endometrioma. Indian J Gynecol. 2025;1(1): 109.

cystic ovarian endometriosis an asymmetric disease? Br J ObstetGynaecol 105: 1018-1021.

16. Machairiotis N, Vasilakaki S, Thomakos N (2020) Inflammatory Mediators and Pain in Endometriosis: A Systematic Review. Biomedicines 9: 54.
17. Maddern J, Grundy L, Castro J, Brierley SM (2020) Pain in Endometriosis. Frontiers in Cellular Neuroscience 14: 590823.
18. Nwadike VR (2024) The connection between pelvic floor dysfunction and endometriosis
19. Silva T, Oliveira M, Oliveira E, Macena R, de Oliveira Silva GT, et al. (2024) Are women with endometriosis more likely to experience reduced physical performance compared to women without the condition? PeerJ 12: e16835.
20. Beretta P, Franchi M, Ghezzi F, Busacca M, Zupi E, et al. (1998) Randomized clinical trial of two laparoscopic treatments of endometriomas: cystectomy versus drainage and coagulation. Fertility and Sterility 70: 1176-1180.
21. Brosens I, Puttemans P, Campo R (2003) Endometriosis: conservative surgery in infertile women. Best Practice & Research Clinical Obstetrics Gynaecology 17: 275-287.
22. Hart RJ, Hickey M, Maouris P, Buckett W (2008) Excisional surgery versus ablative surgery for ovarian endometriomata. Cochrane Database of Systematic Reviews16: CD004992.
23. Olive DL, Pritts EA (2001) Treatment of endometriosis. New England Journal of Medicine 345: 266-275.
24. Parazzini F, Esposito G, Tozzi L, Noli S, Bianchi S (2017) Epidemiology of endometriosis and its comorbidities. European Journal of Obstetrics Gynecology and Reproductive Biology 209: 3-7.
25. Strowitzki T, Marr J, Gerlinger C, Seitz C (2010) Dienogest in the treatment of endometriosis-associated pelvic pain: a 12-week, randomized, double-blind, placebo-controlled study. Human Reproduction 25: 633-641.
26. Wójcik M, Szczepaniak R, Placek K (2022) Physiotherapy Management in Endometriosis. Int J Environ Res Public Health. 19: 16148.
27. Abd El-Kader AI, Gonied AS, Lotfy Mohamed M, Lotfy Mohamed S (2019) Impact of Endometriosis-Related Adhesions on Quality of Life among Infertile Women. Int J Fertil Steril. 13: 72-76.
28. Endometriosis Network. (2023) Physiotherapy for endometriosis: A comprehensive guide.
29. Mick I, Freger SM, Keizerswaard JV, Gholiof M, Leonardi M, et al. (2024) Comprehensive endometriosis care: a modern multimodal approach for the treatment of pelvic pain and endometriosis. Therapeutic Advances in Reproductive Health 18: 26334941241277759
30. Endometriosis Foundation of America. (2023) Physiotherapy in managing endometriomas.
31. Baker J (2017) Pelvic health physiotherapy for managing endometriosis.
32. Vermunt JR, (2015) Physiotherapy for pelvic pain in endometriosis: Clinical management approaches.
33. Meyer R (2015). Integrating physiotherapy into clinical practice for pelvic pain management. Journal of Pain Research 8: 283-289.
34. Jin Y (2020) Advances in physiotherapy for the management of endometriosis. Journal of Women's Health 29: 1306–1313.

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