

Use of medical cannabis in the treatment of endometriosis

Utilização da cannabis medicinal no tratamento da endometriose

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DOI 10.5935/2595-0118.20230021-en

ABSTRACT

BACKGROUND AND OBJECTIVES: Endometriosis is a common gynecological condition, which affects 10% to 15% of women in the reproductive period and up to half of women with chronic pelvic pain and/or infertility. It is estimated that the number of women with endometriosis is 8 million in Brazil and more than 190 million worldwide. In industrialized countries, it is one of the main causes of gynecological hospitalization. The objective of this study was to evaluate the medical literature on the use of cannabis in the treatment of endometriosis.

CONTENTS: Cannabis is increasingly available for the treatment of chronic pain, but its effectiveness remains uncertain due to the lack of randomized trials.

CONCLUSION: Limited evidence suggests that cannabis may relieve pain in some patients, but there is insufficient evidence regarding dose, formulations and best route of administration that precludes a definitive recommendation on cannabis for the relief of chronic pelvic pain of gynecological origin.

Keywords: Cannabis, Endometriosis, Pharmacological treatment.

RESUMO

JUSTIFICATIVA E OBJETIVOS: A endometriose é uma afecção ginecológica comum que atinge de 10% a 15% das mulheres no período reprodutivo e até metade das mulheres com dor pélvica crônica e/ou infertilidade. Estima-se que o número de mulheres com endometriose seja de 8 milhões no Brasil e de mais de 190 milhões no mundo. Em países industrializados, é uma das

principais causas de hospitalização ginecológica. O objetivo deste estudo foi avaliar a literatura médica sobre o uso da cannabis no tratamento da endometriose.

CONTEÚDO: A cannabis está cada vez mais disponível para o tratamento da dor crônica, mas sua eficácia permanece incerta devido à insuficiência de estudos randomizados.

CONCLUSÃO: As evidências limitadas sugerem que a cannabis pode aliviar a dor em alguns pacientes, mas existem evidências insuficientes em relação a dose, formulações e melhor via de administração, o que impede uma recomendação definitiva da cannabis para alívio da dor pélvica crônica de origem ginecológica.

Descritores: Cannabis, Endometriose, Tratamento farmacológico.

INTRODUCTION

Endometriosis is a common gynecological condition that affects 10% to 15% of women in the reproductive period and up to half of women with chronic pelvic pain and/or infertility^{1,2}. The number of women with endometriosis is estimated to be 8 million in Brazil and more than 190 million worldwide. In industrialized countries, it is one of the main causes of gynecological hospitalization³. Despite being one of the most studied diseases in gynecology, some aspects are still being researched, especially the search for its etiopathogenesis⁴. It is known that the clinical and surgical treatments for endometriosis carry a considerable economic burden⁵, besides significantly affecting women's quality of life.

CONTENTS

Clinical treatment

The objective of the clinical treatment is to provide relief from the pain caused by endometriosis, as well as to try to prevent or delay the progression of the disease. Because it is a secondary chronic disease, long-term treatment is necessary to achieve control of the symptoms. There is no way to standardize the treatment and, therefore, it should be individualized according to the symptoms reported, the desire or not to become pregnant, and tolerance to the adverse effects presented by pharmacological options^{6,7}.

Surgical treatment

It is also known that surgical treatment can restore a woman's anatomy and fertility; however, because of the non-standardization of the surgical technique and because it depends on the skill and experience of the surgical team, the recurrence rate varies widely worldwide. Thus, the occurrence of multiple interventions is not uncommon^{8,9}.

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Submitted on July 20, 2022.

Accepted for publication February 27, 2023.

Conflict of interest: none – Sponsoring sources: none

HIGHLIGHTS

- Endometriosis is a very prevalent disease in the world.
- The use of cannabis to treat chronic pain is already well established.
- Lack of studies supporting the use of cannabis in endometriosis.

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DISCUSSION

Thus, a clinical treatment that promotes good pain control and with low adverse effects is necessary. A study¹⁰ using a rat endometriosis model showed that CB1 receptors are expressed in the nerve fibers of the sensory neurons and sympathetic fibers that innervate the endometriosis lesions. In addition, the same authors also identified that CB1 agonists decrease the hyperalgesia caused by endometriosis, while antagonists increase it.

In this other *in vitro* study, the authors used a CB1 and CB2 receptor agonist (WIN 55212-2) and observed a decrease in nodule size in animal models. The authors conclude that this action occurs through inactivation of the protein kinase pathway and that the use of medicinal cannabis seems to be somewhat promising for the treatment of deep endometriosis¹¹.

In addition, it has been known that medical cannabis has had appropriate use for chronic pain with low adverse effects for over a decade¹² and that adenomyosis also has an important relationship with CB1 and CB2 receptors, with a direct relationship to the severity of pain symptoms¹³.

Cannabis plant material typically contains over 450 different compounds, with over 100 classified as phytocannabinoids. The two phytocannabinoids most studied to date in the context of medical research are delta 9-tetrahydrocannabinol (THC, the main psychoactive constituent) and cannabidiol (CBD). Evidence suggests antinociceptive effects of cannabinoids and modulators of the body's own endogenous cannabinoids (endocannabinoids).

The analgesic effects of THC are mediated primarily by agonism of cannabinoid1 (CB1) and cannabinoid2 (CB2), the former being primarily responsible for its psychoactive effects. In contrast, CBD does not activate CB1 or CB2 receptors and appears to have a complex pharmacology with activity at several other receptors involved in pain¹⁴.

Opioids are commonly prescribed for primary chronic pain. However, increasing awareness of the modest benefits and risks of addiction, overdose, and death has generated interest in alternative management strategies, as well as the use of medical cannabis.

A study on preferences regarding medical cannabis among patients living with chronic pain was conducted, which found that the majority of patients using medical cannabis reported positive attitudes toward its use, with improvement in pain and reduction in prescription medications as important factors positively influencing patients' decision to use medical cannabis. On the other hand, concerns about addiction, loss of social control, dependence, behavioral changes, and negative social consequences are associated with reluctance to use medical cannabis¹⁵.

CONCLUSION

Cannabis is increasingly available for the treatment of chronic primary and secondary pain, but its efficacy remains uncertain due to a lack of randomized studies. Limited evidence suggests that cannabis may relieve pain in some patients with endometriosis, but there is insufficient evidence regarding dose, formulations, and best route of administration that precludes a definitive recommendation on cannabis for relief of chronic pelvic pain of gynecologic origin.

AUTHORS' CONTRIBUTIONS

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Writing - Preparation of the original, Writing - Review and Editing, Supervision

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Data Collection, Writing - Preparation of the original

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