International Journal on Obstetrics and Gynecology

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A Case Illustrating Many Advantages of Treating Endometriosis and Pelvic Pain with Dopamine Agonists Rather than Surgery or Other Medical Options

Research Article

Volume 6 Issue 1- 2026

Author Details

Naomi Ganpo-Nkewnkwa[1], Jerome H. Check[1,2] and Sophia Covolesky[3]

[1]Department of Obstetrics and Gynaecology, Rowan University, USA
[2]Department of Obstetrics and Gynecology, Cooper Medical School of Rowan University, USA
[3]Lafayette College, Easton, PA USA

*Corresponding author

Naomi Ganpo- Nkwenkwa, Cooper Medical School of Rowan University, Department of Obstetrics and Gynecology, Division of Reproductive Endocrinology & Infertility, Camden, New Jersey, USA

Article History

Received: March 22, 2026 Accepted: March 30, 2026 Published: April 20, 2026

Abstract

Background: There is a growing number of medical management and surgical procedures for chronic pelvic pain syndrome frequently associated with endometriosis. However, generally, when there are multiple treatments for a given pathological disorder, usually not any of them are highly effective for this problem. Over the years there has been an increase in case reports demonstrating marked relief of various pelvic disorders following treatment with dopaminergic drugs especially dextroamphetamine sulfate (DS). The theoretical reason for this treatment was based on experimental evidence that dopamine functions to diminish cellular permeability. This increased cellular permeability of pelvic tissues, whether genetic or acquired from infection or trauma, allows the infusion of excessive irritants leading to inflammation and pain.

Case report: A 28-year-old woman sought an opinion on how to alleviate pre-menstrual pain and very severe dysmenorrhea. The pain was treatment resistant to non-steroidal anti-inflammatory drugs NSAIDS and oral contraceptive OCP's, only manageable with parenteral narcotics. DS treatment allowed considerable pain relief for 5 years, until one cycle following one cycle with menorrhagia she had a mild episode of dysmenorrhea which led her to have a laparoscopy before her medical insurance lapsed. Following the removal of endometrial implants removal she stopped DS. However, on her 4th cycle post-surgery, she developed severe dysmenorrhea causing the need for parenteral narcotics. After getting a diagnosis of possible adenomyosis, she underwent hysterectomy. However, post-surgery pathology results were negative for adenomyosis. She subsequently developed unbearable symptoms associated with interstitial cystitis. She was once again prescribed DS which completely abrogated her daily bladder pain and urgency and frequency.

Conclusion: Disorders of the sympathomimetic nervous system may be a cause of chronic pelvic pain and are relieved by treatment with dopamine agonists. This case supports the concept that pelvic pain is not so much from the presence of inflammatory endometriotic implants but increased pelvic tissue inflammation and pain related to increased cellular permeability. Another advantage of dopamine agonists over surgical therapy for endometriosis is that the former can also effectively treat other co-morbidities associated with endometriosis, e.g., interstitial cystitis.

Introduction

Chronic pelvic pain (CPP) is a common and burdensome condition which is present in15% of the US population disproportionally affecting women [1]. Annually, it accounts for 10% of all gynecology office visits, 40% of laparoscopies, and 12% of hysterectomies, [1,2]. CPP is defined as pain perceived to arise from the pelvic structures, lasting more than 6 months [1-2]. CPP is a complex condition, and even in modern times the underlying pathophysiology is still not understood. There are several other negative factors which intersect with the condition, including defective cognitive, behavioural, and emotional disorders [1-3]. The most frequently identified condition associated with CPP is endometriosis. It has been estimated that it is present in 10% of all reproductive-age women and 70% of those with CPP [4-8].

Endometriosis is a systemic chronic and inflammatory gynecologic

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condition defined by the presence of endometrial-like tissues outside of the uterus, commonly on the ovaries and pelvic peritoneum [4-8]. Regarding the development of endometriotic lesions, the most common proposed mechanism is retrograde menstruation [6-9]. During the menstrual cycle there is an outflow of the endometrial lining through the patent fallopian tubes into the pelvic space resulting in the seeding of endometrial ectopic tissue assisted by circulation of lymphatic or hematogenous circulation [6-9]. It is implied that for women who develop endometriotic lesions there must be some immune deficiency that prevents the probable normal ability of the body to remove these implants and prevent mitosis of these aberrant endometrial cells.

The clinical presentation of endometriosis is heterogenous and varies overtime. It can be diagnosed incidentally during laparoscopic procedures performed for other indications in asymptomatic patients. It is important to recognize the three subtypes of pelvic endometriosis as they may affect the presentation. Superficial peritoneal endometriosis is the most common subtype defined by lesions of various sizes and colors localized at the surface of peritoneum, which can only be diagnosed laparoscopically. Another subtype is endometriomas which are ovarian cysts which contain dark blood-stained fluid, known as "chocolate cysts" [10,11]. They can be diagnosed with a transvaginal ultrasound. Lastly, there is deep endometriosis, which are lesions that extend beyond the peritoneum and can invade pelvic organs [10-12]. They have the capacity to cause end-organ damage, so prompt diagnosis through transvaginal ultrasound is very important for further clinical management [10-12].

The most common type of pelvic pain is dysmenorrhea [7,8,10]. Other symptoms include non-cyclic pain (which may or may not intensity during the menses), painful sex (dyspareunia), mittelschmerz (painful ovulation), and infertility [4-10]. Deep endometriosis that invades adjacent structures can present with pain on defecation (dyschezia) and/or urination (dysuria), bloody stools (hematochezia) or hematuria [10-12].

Thus, overall, the severity ranges from mild to debilitating pain. It can be episodic (mostly associated with menstrual cycle) or constant. The severity of the anatomical endometrial lesions does not necessarily correlate with the severity of the pain. Furthermore, endometriosis commonly presents with co-existing conditions such as vulvodynia, irritable bowel syndrome (IBS), and painful bladder syndrome, also known as interstitial cystitis (present in nearly 50% of patients) [4-10].

The gold standard for definitive diagnosis of endometriosis is laparoscopic visualization confirmed with histopathology which would describe "endometrial glands and stroma with inflammation and fibrosis" [10-13]. Ultrasonography and Magnetic Resonance Imaging (MRI) can be used to diagnose endometriosis preoperatively; however, the absence of findings does not exclude endometriosis, especially the superficial type with peritoneal lesions [5-10]. The lesions physically have various sizes including nodules or cysts and different colors including classic "gunshot powder", with blue, black, red, transparent and brown colors [13-15].

Most women report onset of endometriosis symptoms during adolescence. However, there are several barriers to early diagnosis including wait time for surgical exploration and confounding symptoms such as cyclic and acyclic pain [6]. There are several differential diagnoses for dysmenorrhea which makes it difficult to isolate endometriosis as they can co-exist with the condition. Severe pelvic pain of various types may be found with adenomyosis.

Medical management

Many medical therapies for pain are often tried empirically based on clinical symptoms without a tissue diagnosis of endometriosis [13]. The ectopic endometrial tissue has been found to have increased production of estradiol, intrinsic aromatase activity, production of inflammatory markers, and resistance to progesterone [16-18]. Therefore, medical management has a goal to suppress those processes to provide relief for patients.

According to international guidelines and the American Association of Obstetricians and Gynecologists, first line medical treatment for endometriosis-related pain is non-steroidal anti-inflammatory drugs (NSAIDS) given their low side-effect profile and easy availability over the counter (OTC) [8,11,16-18]. Another first-line treatment which can be offered in the primary care setting in adjunct to NSAIDS or NSAIDS refractory patients is hormonal therapy including combined estrogen-progestin or progestin only medications. They are low-cost medications which work by targeting sex-steroid dependent pathophysiology.

They function by suppressing ovarian activity inducing anovulation and inhibiting estrogen activity, which can lead to regression of endometrial lesions [16-18]. Some adverse effects of these drugs are heavy vaginal bleeding, vaginal dryness, reduced libido, breast discomfort, sleepiness, and depression [16-18]. Guidelines recommend continuous use of progestin contraceptives by omitting the hormone free interval to induce amenorrhea [16-18]. Progestin-only therapy has been shown to effectively act locally and reduce the risk of thromboembolism compared to combined oral contraceptive pills (OCP) [18]. If the patient does not respond to NSAIDS and/or OCP's within 3 to 6 months, a second–line treatment should be considered.

Second-line hormonal treatment includes gonadotropin-releasing hormone (GnRH) agonists and antagonists, e.g., leuprolide and elagolix. The GnRH antagonist (elagolix) is an oral pill. Once discontinued, there is a rapid return to regular menstruation cycle [18,19]. GnRH agonists and antagonists are expensive and have menopausal symptoms as side effects including decreased bone mineral density and vasomotor symptoms [17, 18]. To mitigate the menopausal side effects, it is recommended to co-administer hormonal therapy with combined estrogen-progestin hormonal therapy or norethindrone acetate [8,11,16-18].

A new class of drug called aromatase inhibitors (AI) which are considered third line treatment are indicated for patient's refractory to all medications stated above. However, they are currently not FDA approved for the treatment of endometriosis. They differ from other options which work by inhibiting estrogen function and estrogen production by inhibiting gonadotropins but instead focus on blocking estrogen produced locally in endometriotic lesions. AI works by blocking aromatase P450 enzyme, the final enzyme in the estrogen biosynthesis pathway, resulting in reducing the size of endometriotic lesions and pelvic pain [17-19].

Surgical Management

If the symptoms of pelvic pain persist, despite medical therapy, or if adverse effects outweigh the beneficial effects of drugs, or drug therapies are contraindicated (patients want to conceive) then surgical treatment is frequently recommended [8,11]. In patients with deep endometriotic lesions which have led to ureteric or bowel obstruction, or endometriomas of any size that have features concerning for malignancy (> 4-5cm) or ovarian torsion, surgery may also be the only management option [8, 10,16-18]. Furthermore, the nonsurgical options discussed above can be used to supplement surgical treatment for better long-term results [20, 21].

For superficial endometriosis, recent randomized trials suggest no significant differences between excision and ablation of endometriosis in reducing long-term dysmenorrhea, dyschezia and chronic pelvic pain when evaluated at 12 months of follow up [22,23].Furthermore, there is no clear consensus on the most effective surgical treatment for advanced endometriosis, which may involve peritonectomy, bowel shaving, discoid or segmental bowel resection, and more [22].

Specifically for the treatment of endometriomas, the European Reproductive Society of Reproduction and Embryology (ESHRE) guide-

lines recommend considering both cystectomy and CO2 laser vaporization, instead of drainage and coagulation as both techniques have similar reduced recurrence rates and endometriosis associated pain [11]. However, according to a meta-analysis, ovarian cystectomy may harm fertility as shown by a 38% reduction in postoperative anti-mullerian hormone levels (marker for ovarian reserve) [18,23]. Recent systemic review and meta-analysis have shown that the treatment of endometriomas with laser vaporization using CO2 has shown more benefits in ovarian reserve level after the intervention [24].

Hysterectomy for endometriosis is an option reserved for women who no longer wish to conceive, who have not responded to more conservative management, or who have a coexisting diagnosis of adenomyosis [5,8,11]. It is accompanied by the removal of all visible endometriosis lesions; however, it still does not guarantee a "cure" for endometriosis. Additionally, it is associated with long term comorbidities including cardiovascular risk and menopausal symptoms [5].

Alternate Concept for Pathophysiology of CPP Leading to Unconventional but Highly Effective Medical therapy. There is evidence that a successful pregnancy requires the development of spiral arteries during the luteal phase and throughout the pregnancy term. These spiral arteries have a cell wall that is only 1 cell thick derived from extra villous trophoblast cells [25]. During the proliferative phase. most uterine arteries have thick cell walls. The development of thin-walled spiral arteries could be from neovascularization. However, the new development of organs or tissue or blood vessels is generally a genomic process, which is a slow process. The sudden appearance of these vessels in the luteal phase favors their development from a non-genomic process. This suggests that these spiral arteries may be created from remodeling the already existing thick-walled arteries which would likely occur related to an autoimmune process [25].

This embryo implantation model suggests that the autoimmune stripping of the thin-walled uterine arteries found in the proliferative phase is facilitated by the production of progesterone (P) in the secretory phase which blocks the biogenic amine dopamine [25]. According to the hypothetical model, since dopamine functions to diminish cellular permeability by interfering with the dopamine effect, irritating agents cross the mucosal barrier and thus stimulate a cellular immune response.

There is evidence that these inflammatory cells which theoretically help in the creation of thin-walled spiral arteries also invade the fetal-placental microenvironment [25]. The composition of these inflammatory cells are 70% natural killer (nK) cells, 20% macrophages and 10% cytotoxic T-cells [25].

In the balance of nature, one might think that if P helps to cause this inflammatory state, it will probably do something to counteract potential immune destruction of the fetal placental semi-allograft. Evidence suggests that at least one way that this is accomplished is by P activating fast-acting membrane P receptors (mPRs) to produce immunomdulatory proteins that suppress the killing activity of these cellular immune cells against the fetus. These proteins include the progesterone-induced blocking factor (PIBF) and the progesterone receptor membrane component-1 protein (PGRMC-1) [26,27]. Activating mPRs may also play a significant role in the way cancer cells escape immune surveillance. Thus, blocking the mPR by a PR antagonist seems to produce a significant halt to cancer progression leading to a marked improvement of length and quality of life in patients with advanced cancers [28-33].

According to the tenets of this concept of a mechanism for embryo implantation, the normal degree of inflammation needed to create spiral arteries is relatively painless. However, various types of pelvic pain may result from excessive inflammation in some of the pelvic tissues [34]. This increase in cellular permeability related to an excess of irritants infusing into pelvic tissues may be related to a polygenic generalized disorder of mucosal barrier defects coupled with a weakening of a specific tissues related to additional monogenic or polygenic abnormalities of that tissue or acquired trauma or infection [35]. Alternatively, the polygenic initiating factor may be a generalized relatively insufficient dopamine response when a tissue is exposed to a noxious stimulus [35].

Evidence to support this theory has been provided by the demonstration of marked amelioration of pelvic pain of various types in small series or individual case reports demonstrating marked pain relief following treatment with dopamine agonists despite being refractory to standard treatments e.g., dysmenorrhea, dyspareunia, mittelschmerz, chronic pelvic pain, pelvic pain of bladder (interstitial cystitis) vulvodynia, vulvovaginitis, and dysorgasmia [36-45].

It is well known that pelvic pain with or without endometriosis may be associated with other medical conditions that may involve extra pelvic pain or functional abnormalities of extra pelvic structures. Dopamine agonists have been found to not only ameliorate the pelvic pain but also concomitant extra pelvic pain or organ dysfunction [46,47]. In fact, dopamine agonists have been used to treat pain from various conditions associated with pain when pelvic pain was not present [48-50]. Dopamine agonists have proven effective for pelvic pain when endometriosis is not present, but there is evidence of adenomyosis [51].

Most of the small case series and anecdotal case reports treating pelvic pain were treated by the dopamine agonist dextroamphetamine sulfate (DS) or other amphetamines e.g., lisdexamfetamine. DS is a sympathomimetic amine releasing dopamine from sympathetic nerve fibers. However, amphetamines also release other biogenic amines, e.g., epinephrine, and norepinephrine. Thus, the possibility exists that it is not the release of dopamine but other biogenic amines that are responsible for the improvement. However, supporting the hypothesis that it is dopamine providing the pivotal role is supported by both pelvic pain and extra pelvic pain relieved by pure dopamine agonists e.g. cabergoline or carbidopa-levodopa [52-56].

A case is presenting not only providing new insights into pelvic pain and the increased cellular permeability syndrome, but also a case emphasizing why dopamine agonist therapy should be much preferred over surgery for cases of severe dysmenorrhea failing to gain relief from standard medical therapy.

Case Report

A 28-year-old woman sought an opinion on how to alleviate pre-menstrual pain and very severe dysmenorrhea. Her pelvic pain started with menarche but had intensified to the degree that for the last 2 years she needed to go to the emergency room to receive parenteral narcotics in at least 70% of her menstrual cycles. The other 30% of the time the pain was still severe but sufficiently tolerable with non-steroidal anti-inflammatory drugs and oral acetaminophen with codeine. The pain was not reduced at all by the use of oral contraceptives either taken cyclically or continuously because with breakthrough bleeding the pain was just as severe and required parenteral narcotics. Low dose norethindrone also caused breakthrough bleeding so frequently that she had pain most of the time, not just premenstrually and during menses.

We suggested dextroamphetamine sulfate in the form of amphetamine salts supplying 18.8mg of dextroamphetamine sulfate (DS) per 30mg amphetamine tablets. The dosage was gradually titrated up and at 60mg amphetamine salts with DS treatment, she had very little to no dysmenorrhea. The considerable pain relief lasted for 5 years until she was 3 weeks late for her menses. When her menses started, it was very heavy and she stated that the pain was the same intensity as the milder dysmenorrhea she used to have during the 30% of the time that she did not require parenteral narcotics. Nevertheless, she was leaving her job to pursue another type of independent work which meant that she would be losing her insurance. Though we advised her that sur-

gery would probably not be necessary because the dysmenorrhea was most likely related to the heavy bleeding, she sought a second opinion. The other consultant, a gynecological surgeon who specialized in the excision technique for endometriosis, convinced her that laparoscopic surgery was probably her best decision. He was not familiar with the use of dopaminergic drugs for treating dysmenorrhea.

He found 3 small endometriotic implants which were excised. He told her that she could stop the amphetamines because the surgery should be sufficient. Indeed, she had no dysmenorrhea for 3 menstrual cycles following the surgery. However, the pain was so severe with cycle 4 that she re-visited the emergency room again for parenteral narcotics. She advised the surgeon of the painful episode. He advised her that he was suspicious of adenomyosis because he was not convinced that all the pain that she experienced was caused by 3 small implants of superficial endometriosis. She agreed to a hysterectomy. Pathological examination did not find any evidence of adenomyosis. A few months later she developed dysuria, urgency, and frequency. Urine for culture and sensitivity did not grow out any bacterial pathogens in 3 samples evaluated at different time periods. The dysuria was becoming unbearable. She consulted a urologist who suggested to her that she had developed interstitial cystitis. She sought another opinion from our group, and we restarted amphetamine salts immediate release tablets 30mg upon arising and at noon. The dysuria, urgency, and frequency completely dissipated [43,44,46].

Her urinary symptoms were totally eradicated for the next 2.5 years with the exception of a couple of times when she failed to fill her prescription for amphetamines in time. She moved to another state, so we do not know if she is still being treated with DS or not. It should be noted that this single woman was nulliparous at the time of the hysterectomy. She said she agreed to the procedure because she did not think that she wanted to have any children. Thus, during the 2.5 years we treated her post hysterectomy, she was not interested in freezing eggs for potential fertilization at a later date to be transferred to a gestational carrier.

Discussion

For many years, case reports were considered the least valuable type of scientific evidence. The emphasis has been on property designed randomized controlled trials (RCTs) However, RCTs are generally very expensive to conduct, and thus many are sponsored by pharmaceutical companies. Therefore, they are sometimes subject to decisions that are conducive to gaining approval of the drug by governmental agencies. Even surgical trials may prove financially beneficial to the surgeons, if showing a positive benefit or for the institution employing those surgeons There have been many RCTs involving both standard medical options and surgical options and comparison of laser vs excision surgery for endometriosis and yet there is still no consensus as to what is the proper therapy. Even conclusions from meta-analyses keep changing.

The authors have selected this case to illustrate some of the confusing issues that have not been resolved despite years of studying pelvic pain with or without the presence of endometriosis. In the introduction, it is mentioned that severe pelvic pain may be present despite minimal or no endometriosis present. Yet some women with no pelvic pain undergoing laparoscopic evaluation for infertility may be found to have extensive endometriosis and infertility. In the case presented, she had a long-term history of excruciating pelvic pain, yet only small superficial endometriotic implants present when she finally had a laparoscopy performed.

Thus, this case supports the new concept that pelvic pain is not so much from the presence of inflammatory endometriotic implants but increased pelvic tissue inflammation and pain related to increased cellular permeability and thus infusion of unwanted irritants. Why does the removal of endometriotic lesions sometimes lead to amelioration of pain and sometimes even for a prolonged period of time? In the case presented, pain relief was only short lived despite the excision technique that was used. Possibly in some cases the presence of endometriosis may exacerbate the permeability defect. One could argue that when no endometriotic lesions are seen or very few superficial implants, the presence of adenomyosis could explain the pain as was the thought of the endometriosis surgeon that the patient consulted. However, in this case she had the hysterectomy, there was no adenomyosis on pathological examination.

The presumptive consideration of adenomyosis by the endometriosis surgery was based on ultrasound findings consistent with the possible presence of endometriosis. Many physicians thinking that pelvic pain equals the presence of endometriosis or adenomyosis will wrongly conclude that if there is no demonstrated presence of endometriosis in a woman with pelvic pain, that pain is probably from adenomyosis and may make wrong decisions for management as the surgeon did in this case. Though this single woman stated she was not interested in having a child, this decision could change in the future, and thus she could be faced with the need for an extremely expensive gestational carrier.

It was mentioned that the one situation where surgery may be preferred over medical therapy may be for infertility since standard medical therapy will preclude pregnancy while the treatment is rendered. Indeed, we have published one of the first studies finding that laparoscopic removal of even mild endometriosis in conjunction with correction of follicular maturation defects, at least in a short period of time, can correct infertility [57]. There is evidence that the pelvic inflammation seen with pelvic pain with or without the presence of endometriosis may be associated with diminished oocyte reserve (DOR) by causing ovarian inflammation and oocyte damage [58].

Surgery could further deplete oocyte reserve by direct damage to the ovaries or damage to ovarian blood supply. In contrast, the use of dopaminergic drugs by impeding inflammatory damage may also impede oocyte depletion [59,60]. In fact, there is some evidence that dopamine agonists could even increase the recruitment of early oocytes that can develop into mature oocytes [61]. The case presented developed severe symptoms of interstitial cystitis shortly after the hysterectomy which was abrogated by resumption of DS. Possibly the interstitial cystitis would have developed subsequent to the severe dysmenorrhea but was precluded by the dopamine agonist therapy [43,44,46].

However, it is known that surgery can cause a subsequent persistent pain syndrome, e.g., chronic regional pain syndrome (CRPS), previously known as reflex sympathetic dystrophy. DS has been found to be an effective therapy for CRPS [62]. Thus, another possible reason to avoid surgery and use dopamine agonists for pelvic pain is the possible development of CRPS from the surgical procedure. Finally, the other advantage of treating CPP with dopamine agonists is that this treatment may not only ameliorate the pelvic pain but also improve other medical conditions involving pain in other areas of the body or other medical conditions not always associated with pain e.g., chronic fatigue syndrome which is frequently seen with CPP [63-65].

The pain described in the case report developed interstitial cystitis not only after the removal of just superficial endometriosis implants, but subsequent to hysterectomy. Therefore, there would be no source for more endometrial tissue ectopically implanted from “retrograde reflux” to explain the development of interstitial cystitis. Thus, this case supports the concept that the presence of endometriotic lesions may not be the source of pelvic pain or pelvic pain of bladder region but just a result of the increased tissue permeability which also allows menstrual tissue to traverse mucosal barriers. However, the main cause of pain would be infiltration of inflammatory elements into pelvic tissues. Indeed, there are studies that show that there is at least twice as

much prevalence of interstitial cystitis in patients with endometriosis vs no endometriosis as summarized by Surrey et al [66].

Another condition that is at least 3 times higher in patients with endometriosis compared to the normal population is the irritable bowel syndrome, as summarized by Aldadier et al [67]. We have reported a case where not only did DS eradicate the symptoms of dysmenorrhea, chronic pelvic pain and mittelschmerz but also severe Crohn's disease [47]. Indeed, dopaminergic drugs have provided marked improvement to standard treatment refractory Crohn's disease and ulcerative colitis in patients who did not have severe pelvic pain [68,69]. We have mentioned that CPP can be associated with DOR [58]. Dopamine agonists have also shown great efficacy in treating women without pelvic pain but with DOR present in ameliorating standard treatment refractory ulcerative colitis and Crohn's disease [70,71]. DS has also completely eradicated long-term (20 years) chronic abdominal pain associated with 30 bowel movements daily in a woman with microscopic colitis [72].

On the other end of the spectrum, dopamine agonists have successfully corrected severe constipation in a teenage girl and a woman with DOR [73,74]. A meta-analysis by Columbo et al evaluated 13 different studies. They found a significant increase in migraine headaches in women with endometriosis [75]. We reported a woman who had complete amelioration of not only her dyspareunia and interstitial cystitis following treatment with DS but also her ocular migraines [46]. Dopamine agonists have been very successful in treating treatment refractory headaches from various sources [49,53,54,76-82].

Rheumatoid arthritis has been found to have an increased prevalence in women with endometriosis [83]. DS has been used to effectively treat patients with rheumatoid arthritis refractory to glucocorticoids and tumor necrosis factor alpha inhibitors [84]. There are other comorbidities seen with higher frequency with endometriosis including eczema and urticaria and other dermatologic conditions [85]. Many of these case reports responding to dopamine agonists have been summarized [48,50].

Conclusion

Though there have been many anecdotal case reports and small series finding that dopamine agonists are frequently quite effective for the relief of pelvic pain of various types with or without the documented evidence of endometriosis. Unfortunately, this treatment is not known by most treating clinicians, most likely because it is not being promoted by pharmaceutical companies. The present case illustrates many of its advantages. 1) The benefit to pain relief is much more prolonged than surgical therapy 2) Pelvic pain is frequently associated with DOR. Surgery may further deplete egg reserve. In contrast, dopamine agonists not only does not cause further egg depletion but may retard the rate of egg loss and possibly even increase the conversion of primordial follicles to primary follicles. 3) In contrast to medical therapy, which prevents pregnancy, dopamine agonists allow the couple to try to conceive while being treated. 4) By diminishing excessive permeability dopamine agonists may actually improve fecundity by inhibiting immune rejection of the early embryo/fetus, thus helping to correct infertility or prevent spontaneous miscarriage. 5) In contrast to surgery or medical therapy, dopamine agonists may also concomitantly correct other co-morbidities that are frequently associated with endometriosis, which are also related to increased cellular permeability.

Acknowledgement

The author thanks Megan McDonald O'Neil for typing this manuscript and her editorial assistance. I also would like to acknowledge Diane Check who helped manage the present case clinically and many of the other cases that led to various case reports.

References

1. Lamvu G, Carrillo J, Ouyang C, Rapkin A (2021) Chronic Pelvic Pain in Women: A Review. JAMA. 325(23): 2381-2391.
2. (2020) ACOG Practice Bulletin, number 218. Obstet Gynecol 135(3): e98-e109.
3. Siedentopf F, Weijenborg P, Engman M, Maier B, Cagnacci A, et.al (2015) ISPOG European Consensus Statement - chronic pelvic pain in women (short version). J Psychosom Obstet Gynaecol 36(4): 161-170.
4. Chauhan S, More A, Chauhan V, Kathane A (2022) Endometriosis: A Review of Clinical Diagnosis, Treatment, and Pathogenesis. Cureus 14(9): e28864.
5. Horne AW, Missmer SA (2022) Pathophysiology, diagnosis, and management of endometriosis. BMJ 14: 379: e070750.
6. Parasar P, Ozcan P, Terry KL (2017) Endometriosis: Epidemiology, Diagnosis and Clinical Management. Curr Obstet Gynecol Rep 6(1): 34-41.
7. Karp BI, Stratton P (2023) Endometriosis-associated chronic pelvic pain. Med 4(3): 143-146.
8. Kuznetsov L, Dworzynski K, Davies M, Overton C (2017) Guideline Committee. Diagnosis and management of endometriosis: summary of NICE guidance. BMJ 6:358.
9. Bulun SE (2022) Endometriosis caused by retrograde menstruation: now demonstrated by DNA evidence. Fertil Steril 118(3): 535-536.
10. Allaire C, Bedaiwy MA, Yong PJ (2023) Diagnosis and management of endometriosis. CMAJ 195(10): E363-E371.
11. International working group of AAGL, ESGE, ESHRE and WES; Tomassetti C, Johnson NP, Petrozza J, John P, Krina T Zondervan et al. (2021) An international terminology for endometriosis. J Minim Invasive Gynecol 28(11): 1849-1859.
12. Chapron C, Santulli P, de Ziegler D, Bruno B, Herve F et al. (2012) Ovarian endometrioma: severe pelvic pain is associated with deeply infiltrating endometriosis. Hum Reprod 27(3): 702-711.
13. Kim JH, Han E (2018) Endometriosis and Female Pelvic Pain. Semin Reprod Med 36(2): 143-151.
14. Ozkan S, Murk W, Arici A (2008) Endometriosis and infertility: epidemiology and evidence-based treatments. Ann N Y Acad Sci 1127: 92-100.
15. Damewood MD (1989) The role of the new reproductive technologies including IVF and GIFT in endometriosis. Obstet Gynecol Clin North Am16: 179-191.
16. Bonavina G, Taylor HS (2022) Endometriosis-associated infertility: From pathophysiology to tailored treatment. Front Endocrinol (Lausanne) 13:1020827.
17. França PRC, Lontra ACP, Fernandes PD (2022) Endometriosis: A Disease with Few Direct Treatment Options. Molecules 27(13): 4034.
18. As-Sanie S, Mackenzie SC, Morrison L, Schrepf A, Zondervan KT et.al (2025) Endometriosis: A Review. JAMA 334(1): 64-78.
19. Giudice LC, As-Sanie S, Arjona Ferreira JC, Rachel B W, Wilk K, et al. (2022) Once daily oral relugolix combination therapy versus placebo in patients with endometriosis associated pain: two replicate phase 3, randomised, double-blind, studies (SPIRIT 1 and 2). Lancet 399(10343): 2267-2279.
20. Nezhat C, Paka BE, Nezhat C, Nezhat F (2013) Video-assisted laparoscopic treatment of endometriosis. In: Nezhat's video-assisted and robotic-assisted laparoscopy and hysteroscopy. New York, NY: Cambridge University Press 383-393.
21. Nezhat C, Vang N, Tanaka PP, Nezhat C (2019) Optimal Management of Endometriosis and Pain. Obstet Gynecol 134(4): 834-839.
22. Burks C, Lee M, DeSarno M, Findley J, Flyckt R et.al (2021) Excision versus ablation for management of minimal to mild endometriosis: a systematic review and meta-analysis. J Minim Invasive Gynecol 28: 587-597.
23. Riley KA, Benton AS, Deimling TA, Kunselman AR, Harkins GJ (2019) Surgical Excision Versus Ablation for Superficial Endometriosis-Associated Pain: A Randomized Controlled Trial. J Minim Invasive Gynecol 26(1): 71-77.

24. Raffi F, Metwally M, Am S (2012) The impact of excision of ovarian endometrioma on ovarian reserve: a systematic review and meta-analysis. J Clin Endocrinol Metab 97(9): 3146-3154.
25. Check JH, Aly J, Chang E (2016) Improving the chance of successful implantation-part I-embryo attachment to the endometrium and adequate trophoblast invasion. Clin Exp Obstet Gynecol 43(6):787-791.
26. Check JH, Aly J (2018) Improving the chance of successful implantation-part 2-Circumventing immune rejection and the fetal semi-allograft. Clin Exp Obstet Gynecol 45(1): 9-13.
27. Check JH, Ganpo NN (2026) The role of membrane progesterone receptor associated proteins in gynecological and reproductive disorders, and cancers: an editor's historical perspective, Part 1: Molecular Aspects Submitted to Journal of Sexual Health and Reproduction J Sex Health Reprod Med 2(1): 1-6.
28. Check JH, Nazari P, Goldberg J, Yuen W, Angotti D (2001) A model for potential tumor immunotherapy based on knowledge of immune mechanisms responsible for spontaneous abortion. Med Hypoth 57(3): 337-343.
29. Check JH, Dix E, Sansoucie L (2009) Support for the hypothesis that successful immunotherapy of various cancers can be achieved by inhibiting a progesterone associated immunomodulatory protein. Med Hypoth 72: 87-90.
30. Check JH, Check D (2019) Therapy aimed to suppress the production of the immunosuppressive protein progesterone induced blocking factor (PIBF) may provide palliation and/or increased longevity for patients with a variety of different advanced cancers – A review. Anticancer Res 39: 3365-3372.
31. Check JH, Check DL (2021) A hypothetical model suggesting some possible ways that the progesterone receptor may be involved in cancer proliferation. Int J Mol Sci 22: 12351.
32. Check JH, Check DL (2023) The role of progesterone and the progesterone receptor in cancer: progress in the last 5 years. Expert Rev Endocrinol Metab 18(1): 5-18.
33. Check JH, Check DL, Wilson C (2025) Good Quality 66.7% 5-year Overall Survival in Terminal Lung Cancer Patients Treated With Mifepristone. Anticancer Res 45(12): 5785-5798.
34. Check JH (2017) Changing the name of a syndrome: Sympathetic neural hyperalgesia edema syndrome becomes – the increased cellular permeability syndrome. Clin Exp Obstet Gynecol 44: 819-823.
35. Check JH, Ganpo Nkwenkwa N (2025) Strong multi-sibling presence of manifestations of the condition called the increased cellular permeability syndrome without paternal presence adds confusion to the mechanism of inheritance in polygenic disorders. Int J Clin Med Case Stud 2(1): 1021.
36. Check JH, Carpenteier P, Meier B, Ganpo-Nkewnkwa N (2025) Dopaminergic drug very effective for relieving pelvic pain in women even when hormonal therapy and surgery were not sufficient. J Sex Health Reprod Med 1(3): 1-4.
37. Check JH, Wilson C (2007) Dramatic relief of chronic pelvic pain with treatment with sympathomimetic amines – case report. Clin Exp Obstet Gynecol 34(1): 55-56.
38. Check JH, Cohen R (2014) Marked improvement of vulvovaginitis of unknown origin in a pediatric patient – case report. Clin Exp Obstet Gynecol 41: 723-724.
39. Check JH, Check DL (2023) Eradication of long-term vaginismus type of genito-pelvic pain/penetration disorder by treating with dextroamphetamine sulfate. Gynecol Reprod Health 7(2): 1-5.
40. Check JH, Neumann B, Check D (2024) New Insight into the Etiology and Treatment of the Vulvostomatodynia and Review of Treating Pelvic Pain with Dopaminergic Drugs. Gynecol Reprod Health 8(4): 1-8.
41. Check JH (2025) Increased Cellular Permeability Related to Relative Dopamine Deficiency May Play a Major Role in the Etiology of Dyspareunia by Causing Inflammation. J Sex Health Reprod Med 1(1): 1-7.
42. Check JH, Ganpo Nkwenkwa N (2025) Marked relief of painful ejaculation (Dysogasmia) in a young male treated with the dopaminergic drug dextroamphetamine sulfate. J Sex Health Reprod Med 1(2): 1-3.
43. Check JH, Katsoff B, Citerone T, Bonnes E (2005) A novel highly effective treatment of interstitial cystitis causing chronic pelvic pain of bladder origin: case reports. Clin Exp Obstet Gynecol 32: 247-249.
44. Check JH, Cohen G, Cohen R, Dipietro J, Steinberg B (2013) Sympathomimetic amines effectively control pain for interstitial cystitis that had not responded to other therapies. Clin Exp Obstet Gynecol 40: 227-228.
45. Check JH (2016) Chronic unremitting lower abdominal pain quickly abrogated following treatment with amphetamine. Clin Exp Obstet Gynecol 43: 109-111.
46. Check JH, Cohen R (2014) The triad of luteal phase ocular migraines, interstitial cystitis, and dyspareunia as a result of sympathetic nervous system hypofunction. Clin Exp Obstet Gynecol 41(5): 575-577.
47. Check JH (2016) Increased tissue permeability and sympathetic nervous system hypofunction may be the common link between dysmenorrhea, chronic pelvic pain, Mittelschmerz, and Crohn's disease. Clin Exp Obstet Gynecol 43: 112-113.
48. Check JH (2024) Most chronic conditions in women are related to increased cellular permeability, and most can be effectively treated with dopaminergic drugs. J Biomed Res Environ Sci 5(4): 373-386.
49. Check DL, Check JH (2020) Various presentations of the increased cellular permeability syndrome in males responding very well to sympathomimetic amine therapy – possible treatment for end-stage Covid-19 complications. J Med Clin Res & Rev 4(7): 1-7.
50. Check JH (2025) Studies of Mechanisms Involved in Successful Embryo Implantation Has Led to Novel Highly Effective Treatments for a Plethora of Chronic Illnesses and Advanced Cancer. Am J Biomed Sci & Res 25(4).
51. Check JH, Jaffe A (2015) Resolution of pelvic pain related to adenomyosis following treatment with dextroamphetamine sulfate. Clin Exp Obstet Gynecol 42: 671-672.
52. Check JH, Check D (2023) Improvement of severe chronic pelvic pain and dysmenorrhea following treating with cabergoline. Gynecol Reprod Health 7(1): 1-6.
53. Check JH, Check DL, Neumann B (2024) Marked improvement of severe treatment resistant migraine headaches with the dopaminergic drug cabergoline. J Med-Clin Res&Rev 8(3): 1-5.
54. Check JH, Lombardi G, Janvier J (2024) Two new clinical manifestations of the increased cellular permeability syndrome responding well to dopaminergic drugs; carpel tunnel syndrome, and sesamoiditis. Bio Med Res J 8(3): 814-818.
55. Ford B, Louis ED, Greene P, Fahn S (1996) Oral and genital pain syndromes in Parkinson's disease. Mov Disord. 11(4):421-426.
56. Check JH, Srivastava P, Kelley C (2025) The relative efficacy of three different dopamine agonists in relieving symptoms of various manifestations of the increased cellular permeability syndrome. Case report. Int J Clin Med Case Stud 2(2): 1039.
57. Nowroozi K, Chase JS, Check JH, Wu CH (1987) The importance of laparoscopic coagulation of mild endometriosis in infertile women. Int J Fertil 32: 442-444.
58. Check JH (2003) What role does decreased ovarian reserve play in the etiology of infertility related to endometriosis? [Letter-to-the-editor] Hum Reprod 18(3): 653-654.
59. Check JH (2024) Treating pelvic pain and endometriosis with the goal of correcting infertility and/or preventing miscarriage. J Reprod Med Gynecol Obstet 9: 167.
60. Check JH, Neulander M, Check DL, O'Neil MM, Wilson CBS et.al (2025) The relationship between diminished ovarian reserve and the increased cellular permeability syndrome. Int J Clin Med Case Stud 2(1): 1017.

Citation: Ganpo-Nkewnkwa N, H. Check J, Covolesky S. A Case Illustrating Many Advantages of Treating Endometriosis and Pelvic Pain with Dopamine Agonists Rather than Surgery or Other Medical Options. *Int J Obst & Gync.* 2026; 6(1): 1-7. DOI : 10.51626/ijog.2026.06.00051

61. Check JH, Ganpo-Nkwenkea, Srivastava P (2025) Besides abrogating an unusual case of eating induced mid-epigastric pain, treatment with dextroamphetamine may help to increase oocyte reserve in a young teenage girl possibly heading from premature menopause. J Sex Health Reprod Med 1(3): 1-5.

62. Check JH, Cohen R (2014) Sympathomimetic amine therapy found effective for treatment of refractory chronic complex regional pain syndrome (reflex sympathetic dystrophy). Clin Exp Obst Gyn 41: 478-482.

63. Check JH, Cohen R (2011) Sympathetic neural hyperalgesia edema syndrome, a frequent cause of pelvic pain in women, mistaken for Lyme disease with chronic fatigue. Clin Exp Obstet Gynecol 38: 412-413.

64. Check DL, Check JH, Katsoff B (2020) Dextroamphetamine sulfate therapy markedly improves the chronic fatigue syndrome. J Nurs Occup Health 2(3): 146-148.

65. Check DL, Check JH, Citerone T, Cremin N (2020) Sympathomimetic amine therapy markedly improves severe fatigue that diminishes quality of life in patients with cancer – A case report. Cancer Sci Res 3(3): 1-3.

66. Surrey ES, Soliman AM, Johnson SJ, Davis M, Castelli-Haley J, et.al (2018) Risk of Developing Comorbidities Among Women with Endometriosis: A Retrospective Matched Cohort Study. Journal of Women S Health 27(9): 1114-1123.

67. Aldardier N, Eissa GA, Shaheen AM, Sanedi AM, Alghamdi T, et.al (2024) Prevalence of irritable bowel syndrome in endometriosis patients: A cross-sectional study. J Family Med Prim Care 13(11): 4931-4936.

68. Check JH, Katsoff B, Cohen (2011) A case report showing that a woman with ulcerative colitis refractory to standard therapy responded well to the sympathomimetic amine dextroamphetamine sulfate. Inflam Bowel Dis 17: 870-871.

69. Check JH, Katsoff B, Cohen R (2010) A novel highly effective medical treatment of severe treatment refractory Crohn's disease using sympathomimetic amines – case report. Inflam Bowel Dis 16: 1999-2000.

70. Check JH, Neumann B (2024) Combined Dopaminergic Drugs with Supplemental Progesterone to Treat Recurrent Miscarriage and Ulcerative Colitis despite Diminished Egg Reserve. Gynecol Reprod Health 8(2): 1-10.

71. Check JH, Check D (2024) Neumann B. A Novel Treatment of Crohn's Disease that is Not Only Safe in Pregnancy but Can Correct Infertility and Recurrent Miscarriages. Gynecol Reprod Health 8(2): 1-9.

72. Check JH, Cohen R (2019) Sympathomimetic amine therapy abrogates severe long-term unexplained abdominal pain and diarrhea (microscopic colitis) – possible infertility implications. Clin Exp Obstet Gynecol 46: 489-491.

73. Check JH, Katsoff B (2013) The use of sympathomimetic amines for the treatment of severe constipation refractory to conventional therapy – case report. Clin Exp Obstet Gynecol 40: 284-285.

74. Check JH, Neumann BA (2024) Correction of treatment refractory infertility and severe constipation following treatment with supplemental progesterone and a dopaminergic drug. Gyn Reprod Health 8(3): 1-9.

75. Colombo GE, Makieva S, Somigliana E, Schoretsanitis G, Leeners B, et.al (2025) The association between endometriosis and migraine: a systematic review and meta-analysis of observational studies. The Journal of Heachache and Pain 26(1): 82.

76. Check JH, Check D, Cohen R (2009) Sympathomimetic amine therapy may markedly improve treatment resistant headaches related to a vascular permeability defect common in women. Clin Exp Obstet Gynecol 36(3): 189-191.

77. Check JH, Cohen R, Check D (2011) Evidence that migraine headaches in women may be related to a common defect in the sympathetic nervous system as evidenced by marked improvement following treatment with sympathomimetic amines. Clin Exp Obstet Gynecol 38: 180-181.

78. Check JH, Cohen R (2011) Marked improvement of headaches and vasomotor symptoms with sympathomimetic amines in a woman with the sympathetic hyperalgesia-edema syndrome. Clin Exp Obstet Gynecol 38: 88-89.

79. Check JH, Cohen R (2014) Severe headaches from intracranial hypertension (pseudotumor cerebri) abrogated by treatment with dextroamphetamine sulfate. Clin Exp Obstet Gynecol 41: 211-213.

80. Check JH, DiAntonio G, Cohen R (2014) Dextroamphetamine sulfate, a very effective drug for pelvic pain relieved severe retroorbital stabbing pain in a woman with keratoconus who failed to respond to bilateral corneal implants. Clin Exp Obstet Gynecol 41: 80-82.

81. Check JH (2016) Dextroamphetamine sulfate treatment eradicates long-term chronic severe headaches from temporomandibular joint syndrome -a case that emphasizes the role of the gynecologist in treating headaches in women. Clin Exp Obst Gynecol 43: 119-122.

82. Check JH, Citerone M, Citerone T (2018) The increased cellular permeability syndrome as a cause of traumatic stutterine. Clin Exp Obstet Gynecol 45: 773-774.

83. Chen SF, Yang YC, Hsu CY, Shen YC (2020) Risk of Rheumatoid Arthritis in Patients with Endometriosis: A Nationwide Population-Based Cohort Study. Journal of Women S Health 30(8): 1160-1164.

84. Boimel P, Check JH (2007) Marked improvement of intractable arthritic pain in a woman with rheumatoid arthritis with sympathomimetic amine treatment despite previous failure with standard therapy and possible implications for last trimester unexplained fetal demise -case report. Clin Exp Obst Gynecol 34: 254-256.

85. Kvaskoff M, Mu F, Terry KL, Harris HR, Poole EM, et al. (2015) Endometriosis: a high-risk population for major chronic diseases? Human Reproduction Update 21(4): 500-516.

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