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# Development of a centre for interdisciplinary care of patients with pelvic pain and endometriosis

Women in British Columbia are benefiting from the surgical, medical, nursing, physiotherapy, and counseling services provided by the BC Women's Centre for Pelvic Pain and Endometriosis.

**Abstract: Pelvic pain and endometriosis affect many women in British Columbia. The new BC Women's Centre for Pelvic Pain and Endometriosis provides interdisciplinary care for women, including minimally invasive surgery, medical management, pelvic physiotherapy, and cognitive approaches to chronic pain. The centre is also actively involved in research and teaching.**

Chronic pelvic pain (CPP) is defined as pelvic pain of 3 to 6 months duration. Present in 10% to 20% of reproductive-aged women, CPP has a major impact on women's health.[1-4] While endometriosis is the most common gynecological cause of CPP, responsible for $1.8 billion in total annual costs in Canada, chronic pelvic pain can also result from musculoskeletal, gastrointestinal, urological, or sometimes psychological comorbidity.[3,5,6] Management of CPP can be challenging because of difficulties in establishing a diagnosis and the complexity of surgical treatments. As well, the development of central sensitization can result in hyperalgesia, chronic pain syndrome, and dysfunction in multiple body systems.[7-9]

Optimal management of pelvic pain and endometriosis requires an integrated, interdisciplinary approach at a centre offering advanced diagnostics, a full range of medical and surgical treatments, dedicated nursing services, physiotherapy, counseling, patient education, and small group sessions for patients. One randomized trial has shown the benefit of an interdisciplinary approach,[10] and the Society of Obstetricians and Gynaecologists of Canada (SOGC) has produced

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guidelines for CPP that support interdisciplinary care.[5,11] In recognition of the need for such care, the BC Women's Centre for Pelvic Pain and Endometriosis was launched to provide integrated health services and undertake research.

## Development of the centre

For the past 15 years, specialized care for CPP in the province has been provided by two gynecologists at BC Women's Hospital and Health Centre. Over time it has become evident that increased capacity and interdisciplinary resources are required to meet the growing demand and to provide optimal care. Previously, there was a wait list of 6 to 9 months for a gynecological consultation plus an additional wait of 6 months for surgery if required. Because care was not optimal and many patients could not afford interdisciplinary services in the community, a business case was developed for the creation of the BC Women's Centre for Pelvic Pain and Endometriosis. The centre was funded by the Provincial Health Services Authority in 2011 and launched in October 2012. Today the centre provides nursing, physiotherapy, and counseling services, and operates with the benefit of administrative infrastructure, much-needed new equipment, expanded OR capacity, and support for a third gynecologist and specialized anesthetic consultation.

## Interdisciplinary care

Patients referred to the BC Women's Centre for Pelvic Pain and Endometriosis undergo comprehensive history taking and examination, including Carnett's test,[12] bedside endovaginal ultrasound (EVUS) to screen for endometriomas, adenomyosis, and other structural abnormalities, and an EVUS-assisted pain mapping pelvic exam. This exam relies on palpation of the different pelvic structures in order to establish the cause(s) of pain, and was found in a recently completed study at our centre to increase sensitivity for abnormalities later found on laparoscopy

After examination, patients may be offered hormonal treatment to manage pelvic pain and endometriosis, or neuromodulators, including tricyclics, SNRIs, and anti-epileptics, if there is evidence of central sensitization. If pain management strategies and nonopioid analgesics are insufficient, the team at the centre may collaborate with the patient's family physician to consider the judicious use of opioids. When opioids are used, the centre utilizes the Opioid Manager,[13] establishes a narcotic contract, and does urine drug screening.

As well as medical management, the centre offers a full-range of minimally invasive surgeries, from conservative to definitive (hysterectomy with or without bilateral salpingo-oophorectomy). The primary conservative procedure undertaken is laparoscopic excision of endometriosis tissue using monopolar electrosurgery and a needle-tip L-hook instrument, with the goal of leaving no visible residual disease. Cochrane reviews of conservative surgical treatment of endometriosis have confirmed its benefit for both pain and fertility.[14,15] In addition, advanced laparoscopic management is offered for complex cases, including those involving deep infiltrating endometriosis nodules, bowel endometriosis and ovarian endometriomas, and severe adhesions. For the most severe cases, an interdisciplinary approach is employed, as recommended by the SOGC endometriosis guidelines,[16] with members of the centre team working alongside laparoscopic specialists in general surgery and urology. Other procedures offered include laparoscopic ovarian suspension for adhesion prevention,[17] uterine suspension for symptomatic uterine retroversion[18-20] and inguinal canal decompression and mesh placement for patients with inguinal tenderness on pelvic exam.[21]

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In recognition of the role musculoskeletal causes may play in CPP, described in the SOGC guidelines,[1] a musculoskeletal assessment of the spine, hip, pelvis (sacroiliac and symphysis joints), and pelvic floor is performed. Treatment may include manual therapy (joint, soft tissue, neural mobilization), motor control exercises, posture and positioning recommendations,

and bladder/bowel strategies. Surface electrode EMG biofeedback and real-time ultrasound may also be utilized.

## Patient education

Education is key to managing pelvic pain, whatever the cause. At the centre patients are educated about aggravators of their pain, and are taught techniques to independently manage their pain, including relaxation, mindfulness, and pacing and grading. Patients learn about pain theory, the link between mood and pain, and the impact of sexual pain. Patients are also offered counseling on both an individual and a small group basis. Patients with poor function may be referred to community resources for people living with disabilities, chronic pain, or both. A dedicated RN coordinates all the interdisciplinary activities at the centre.

## Provincial initiatives

To improve knowledge translation and link between different services for patients with chronic pain, Pain BC was formed in 2009. Other initiatives followed, including a province-wide pain specialist hotline, community-based undertakings such as the Chronic Pain Self-Management Program offered through the University of Victoria, and patient-led organizations such as the People in Pain Network. Work also began in September 2012 on a province-wide Practice Support Program for continuing education in pain management for family physicians. Members of the team at BC Women's Centre for Pelvic Pain and Endometriosis are actively involved in engaging with all these province-wide initiatives and integrating them into care offered at the centre. Recently, the centre developed an online needs assessment survey for all obstetrician/gynecologists in BC, and initiatives involving phone support, videoconferencing, and online resources are being developed for both rural and urban communities throughout the province.

## Research and teaching

Members of the team at the centre are actively involved in research and have conducted retrospective studies of pelvic pain and endometriosis.[21-23] Over the last year, the team established standardized protocols for clinical care, including the use of validated questionnaires.[24,25] Ethics approval has been obtained for prospective data collection to evaluate patient outcomes and to develop clinical pathways for the management of pelvic pain and endometriosis. The database is expected to serve as a springboard for future randomized trials.

In addition, a translational research program has begun at the centre in collaboration with pathologists at Vancouver Hospital and the BC Ovarian Cancer Research team. After patient consent is obtained, endometriosis specimens collected during surgery are banked for genomic studies. These specimens will be key to the development of a UBC endometriosis tissue bank.

The centre also continues to be actively involved in the training of medical students, residents, and fellows.

## Summary

Pelvic pain and endometriosis have a major impact on the lives of women in their reproductive years and result in significant costs to the Canadian health care system. The BC Women's Centre for Pelvic Pain and Endometriosis aims to be a useful resource for both health care practitioners and the women of British Columbia by providing effective and comprehensive care and engaging in high-quality research. The centre also aims to further the education of both patients and health care providers in endometriosis and chronic pelvic pain.

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