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The Management of Uterine Leiomyomas

This clinical practice guideline has been prepared by the Uterine Leiomyomas Working Group, reviewed by the Clinical Practice Gynaecology, Reproductive Endocrinology & Infertility, and Family Physician Advisory Committees, and approved by the Executive and Board of the Society of Obstetricians and Gynaecologists of Canada.

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Abstract

Objectives: The aim of this guideline is to provide clinicians with an understanding of the pathophysiology, prevalence, and clinical significance of myomata and the best evidence available on treatment modalities.

Options: The areas of clinical practice considered in formulating this guideline were assessment, medical treatments, conservative treatments of myolysis, selective uterine artery occlusion, and surgical alternatives including myomectomy and hysterectomy. The risk-to-benefit ratio must be examined individually by the woman and her health care provider.

Outcomes: Implementation of this guideline should optimize the decision-making process of women and their health care providers in proceeding with further investigation or therapy for uterine leiomyomas, having considered the disease process and available treatment options, and reviewed the risks and anticipated benefits.

Evidence: Published literature was retrieved through searches of PubMed, CINAHL, and Cochrane Systematic Reviews in February 2013, using appropriate controlled vocabulary (uterine fibroids, myoma, leiomyoma, myomectomy, myolysis, heavy menstrual bleeding, and menorrhagia) and key words (myoma, leiomyoma, fibroid, myomectomy, uterine artery embolization, hysterectomy, heavy menstrual bleeding, menorrhagia). The reference lists of articles identified were also searched for other relevant publications. Results were restricted to systematic reviews, randomized control trials/controlled clinical trials, and observational studies. There were no date limits but results were limited to English or French language materials. Searches were updated on a regular basis and incorporated in the guideline to January 2014. Grey (unpublished) literature was identified through searching the websites of health technology assessment and health technology–related agencies, clinical practice guideline collections, and national and international medical specialty societies.

Benefits, Harms, and Costs: The majority of fibroids are asymptomatic and require no intervention or further investigations. For symptomatic fibroids such as those causing menstrual abnormalities (e.g. heavy, irregular, and prolonged uterine bleeding), iron defficiency anemia, or bulk symptoms (e.g., pelvic pressure/pain, obstructive symptoms), hysterectomy is a definitive solution. However, it is not the preferred solution for women who wish to preserve fertility and/or their uterus. The selected treatment should be directed towards an improvement in symptomatology and quality of life. The cost of the therapy to the health care system and to women with fibroids must be interpreted in the context of the cost of untreated disease conditions and the cost of ongoing or repeat investigative or treatment modalities.

Values: The quality of evidence in this document was rated using the criteria described in the Report of the Caadian Task Force on Preventive Health Care (Table 1).

Key Words: Myoma, leiomyoma, fibroid, myomectomy, uterine artery embolization, hysterectomy, heavy menstrual bleeding, menorrhagia

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Table 1. Key to evidence statements and grading of recommendations, using the ranking of the Canadian Task Force on Preventive Health Care

Quality of evidence assessment*	Classification of recommendations†
I: Evidence obtained from at least one properly randomized controlled trial	A. There is good evidence to recommend the clinical preventive action
II-1: Evidence from well-designed controlled trials without randomization	B. There is fair evidence to recommend the clinical preventive action
II-2: Evidence from well-designed cohort (prospective or retrospective) or case–control studies, preferably from more than one centre or research group	C. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision-making
II-3: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category	D. There is fair evidence to recommend against the clinical preventive action
	E. There is good evidence to recommend against the clinical preventive action
III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees	L. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision-making

*The quality of evidence reported in here has been adapted from The Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.[204]

†Recommendations included in these guidelines have been adapted from the Classification of Recommendations criteria described in the Canadian Task Force on Preventive Health Care.[204]

Summary Statements

1. Uterine fibroids are common, appearing in 70% of women by age 50; the 20% to 50% that are symptomatic have considerable social and economic impact in Canada. (II-3)
2. The presence of uterine fibroids can lead to a variety of clinical challenges. (III)
3. Concern about possible complications related to fibroids in pregnancy is not an indication for myomectomy except in women who have had a previous pregnancy with complications related to these fibroids. (III)
4. Women who have fibroids detected in pregnancy may require additional maternal and fetal surveillance. (II-2)
5. Effective medical treatments for women with abnormal uterine bleeding associated with uterine fibroids include the levonorgestrel intrauterine system, (I) gonadotropin-releasing hormone analogues, (I) selective progesterone receptor modulators, (I) oral contraceptives, (II-2) progestins, (II-2) and danazol. (II-2)
6. Effective medical treatments for women with bulk symptoms associated with fibroids include selective progesterone receptor modulators and gonadotropin-releasing hormone analogues. (I)
7. Hysterectomy is the most effective treatment for symptomatic uterine fibroids. (III)
8. Myomectomy is an option for women who wish to preserve their uterus or enhance fertility, but carries the potential for further intervention. (II-2)
9. Of the conservative interventional treatments currently available, uterine artery embolization has the longest track record and has been shown to be effective in properly selected patients. (II-3)
10. Newer focused energy delivery methods are promising but lack long-term data. (III)

Recommendations

1. Women with asymptomatic fibroids should be reassured that there is no evidence to substantiate major concern about malignancy and that hysterectomy is not indicated. (III-D)
2. Treatment of women with uterine leiomyomas must be individualized based on symptomatology, size and location of fibroids, age, need and desire of the patient to preserve fertility or the uterus, the availability of therapy, and the experience of the therapist. (III-B)
3. In women who do not wish to preserve fertility and/or their uterus and who have been counselled regarding the alternatives and risks, hysterectomy by the least invasive approach possible may be offered as the definitive treatment for symptomatic uterine fibroids and is associated with a high level of satisfaction. (II-2A)
4. Hysteroscopic myomectomy should be considered first-line conservative surgical therapy for the management of symptomatic intracavitary fibroids. (II-3A)
5. Surgical planning for myomectomy should be based on mapping the location, size, and number of fibroids with the help of appropriate imaging. (III-A)
6. When morcellation is necessary to remove the specimen, the patient should be informed about possible risks and complications, including the fact that in rare cases fibroid(s) may contain unexpected malignancy and that laparoscopic power morcellation may spread the cancer, potentially worsening their prognosis. (III-B)
7. Anemia should be corrected prior to proceeding with elective surgery. (II-2A) Selective progesterone receptor modulators and gonadotropin-releasing hormone analogues are effective at correcting anemia and should be considered preoperatively in anemic patients. (I-A)
8. Use of vasopressin, bupivacaine and epinephrine, misoprostol, peri-cervical tourniquet, or gelatin-thrombin matrix reduce blood loss at myomectomy and should be considered. (I-A)
9. Uterine artery occlusion by embolization or surgical methods may be offered to selected women with symptomatic uterine fibroids who wish to preserve their uterus. Women choosing uterine artery occlusion for the treatment of fibroids should be counselled regarding possible risks, including the likelihood that fecundity and pregnancy may be impacted. (II-3A)