Aromatase inhibitor for uterine fibroids

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RHL summary

Findings of the review: Aromatase inhibitors are a new class of drugs that has been used to treat breast and ovarian cancer. This review includes only one non-blinded trial involving 70 women with uterine fibroids. That trial had compared letrozole versus gonadotrophin-releasing hormone agonist (GnRHa). There was no information about the relief of fibroids symptom which was the primary review outcome. After 12 weeks of treatment, letrozole and gonadotrophin-releasing hormone agonist (GnRHa) reduced uterine fibroid volume by 46% and 32%, respectively. The difference was not statistically significant. Women in the letrozole group reported significantly less hot flushes than those in the GnRHa group.

Implementation: More well-designed randomized controlled trials are needed to evaluate the effectiveness of aromatase inhibitor for treating uterine fibroids.

Cochrane review


Abstract

Uterine fibroids, also called uterine leiomyomas or myomas, are the most common benign tumours in women of reproductive age. Albeit generally benign, uterine fibroids can have a major impact on women’s health and quality of life by contributing to abnormal uterine bleeding and causing pelvic pressure symptoms (such as increased urinary frequency, pelvic pain and constipation). Traditional treatments for symptomatic fibroids include a variety of surgical techniques. However, because of the high recurrence rate, as well as possible pain and infertility caused by the formation of postoperative adhesions, this approach may not be advisable. Safer and more effective medical therapy has long been awaited. Both in vitro studies and clinical trials have suggested that use of the aromatase inhibitors (AIs), a class of anti-oestrogens, might inhibit fibroid growth, thereby eliminating the need for surgery.

To evaluate the effectiveness and safety of aromatase Inhibitors (AIs) in women with uterine fibroids.

We searched the following databases (from inception to August 21, 2013): Cochrane Menstrual Disorders and Subfertility Group Specialised Register, Cochrane Central Register of Controlled Trials (CENTRAL)
Randomised controlled trials (RCTs) in women of reproductive age comparing the effects of any AI versus placebo, no treatment or any medical treatment/surgery were included.

Selection of eligible trials, assessment of trial quality and data extraction were performed independently by two review authors. If data were available, we planned to calculate odds ratios (ORs) for analysis of dichotomous data and mean differences for continuous data, with 95% confidence intervals (CIs).

Only one trial involving 70 participants was included. This trial did not report our primary review outcome (relief of symptoms of fibroids). The only secondary review outcomes reported by this trial were adverse effects (hot flushes) and reduction in fibroid size. Significantly fewer women reported hot flushes in the letrozole group than in the GnRHa group (0/33 vs 26/27, P < 0.05). Use of letrozole reduced fibroid volume by 46% and use of a gonadotrophin-releasing hormone (GnRH) agonist (GnRHa) by 32% after 12 weeks of treatment; these proportions were not significantly different. The included trial did not report data on fibroid volume in a form that permitted calculation of an odds ratio. Moreover, it was unblinded and included only 60/70 women in analysis.

Evidence is insufficient to support the use of AI drugs in the treatment of women with uterine fibroids.

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