Vaginal Bromocriptine Improves Pain and Bleeding in Women With Adenomyosis

Abstract ID : 2403
Submitted by : Johanna Andersson the 2017-01-07 12:24:14
Category : SEUD CONGRESS
Typology : Communication orale / Oral communication
Status : Validated
Authorisation to disclose : Yes/Oui

Vaginal Bromocriptine Improves Pain and Bleeding in Women With Adenomyosis
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Introduction
Adenomyosis affects up to 65% of reproductive age women, causing abnormal uterine bleeding and painful menses. The only widely accepted treatment is hysterectomy. Prolactin is produced in the endometrium and myometrium and is a smooth muscle cell mitogen. Murine models of adenomyosis have shown a pathogenic role for intrauterine prolactin. In this study, we test the hypothesis that bromocriptine, a dopamine agonist with prolactin inhibiting effects, will decrease symptoms of adenomyosis.

Material and methods
In this multi-center prospective single arm pilot study, women with magnetic resonance image diagnosed adenomyosis and heavy menstrual bleeding, from a private clinic and university hospital in Sweden and university hospital in the United States were studied. 23 women were enrolled, 19 finished the study. After baseline assessment, vaginal bromocriptine was increased stepwise to a dose of 5mg daily. Patients continued bromocriptine for 6 months. Women completed validated measures at baseline and after 6 months of treatment including a Pictorial Blood Loss Assessment Chart (PBLAC), visual analog scale for pain (VAS), Mc Gill Pain Questionnaire (MPQ), Aberdeen Menorrhagia Clinical outcomes (AMCOQ) and the Fibroid Symptom Quality of life (UFS-QOL) health related quality of life (HRQL) and symptom severity (SSS) subscore. Scores were compared between baseline and 6 months using the Wilcoxon signed rank test.

Results
Mean (±SD) age of women was 44.8 ± 3.5 years, with 79% reporting menses lasting for ≥7 days and 68% reporting moderate to severe cramps. All measures [median(IQR)] suggested improvement in bleeding, pain and quality of life when evaluated 6-months after starting bromocriptine compared to baseline. Symptoms were reduced for PBLAC at baseline 349 (292-645) vs. 251 (91-384) at 6 months (p<0.01), AMCOQ at baseline 51 (40-61) vs. 35(21-48) at 6 months (p=0.01), VAS at baseline 5.0 (4.0-8.3) vs. 2.2 (0.4-6.3) at 6 months (p=0.01), MPQ at baseline 10 (5.0-22) vs. 6.0 (3.0-16) at 6 months (p=0.02) and SSS at baseline 59.4 (43.8-71.9) vs 43.8 (28.1-59.4) at 6 months (p<0.01).
Health-related quality of life improved based on the UFS QOL HRQL increasing from 58 (37-63) at baseline to 65 (52-84) at 6 months (p <0.01).

Conclusions
Significant improvement in menstrual bleeding and pain after bromocriptine treatment suggests a key role for prolactin in adenomyosis and the potential of a novel therapeutic agent for this common disease with limited alternative therapies.