ORIGINAL ARTICLE

Use of Low Dose Danazol in Luteal Phase Only as Management of Premenstrual Syndrome and Mastalgia

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ABSTRACT

Background: Approximately 30%-70% of women experience mastalgia at some point. However, is termed as premenstrual syndrome (PMS) and mastalgia. Various substances have been used to treat this condition. The most effective treatment so far is elimination of ovarian cycle by using high dose estrogen, continuous combined oral contraceptive (COC), GnRH and Danazol. Danazol used in small dose of 200mgs daily in the luteal phase has shown promising results in the alleviation of symptoms.
Aim: To see the efficacy of low dose danazol (200mg daily) in the treatment of PMS & cyclic mastalgia.
Methods: Study was carried out at Ghurki Trust Teaching Hospital, Lahore from January 2014 to August 2014 (both inclusive). Patients who had recurrent symptoms of PMS in 4 out of previous 6 cycles were included. Exclusion criteria were defined and followed strictly. Patients were asked to fill in a questionnaire regarding the severity of their symptoms. Danazol was prescribed in a dose of 200 mgs per day. Patients were asked to fill the same performa after 3 cycles of treatment. The answers were quantified and analyzed.
Results: Subjective improvement in the symptoms of breast pain was seen in 22 out of 30 patients (73.3%). Thirteen patients reported less mood disturbance (43.3%). Feeling of bloating was improved in 20 patients (66.6%).
Conclusion: Danazol is small doses of 200 mgs per day appears to be an effective treatment for managent of mastalgia and PMS in this small group of patient. Further studies need to be carried out to establish the role of Danazol in treatment of PMS and mastalgia
Keywords: Premenstrual syndrome, mastalgia, luteal phase, danzol

INTRODUCTION

Premenstrual symptoms and cyclic breast pain/ discomfort are considered to be physiological occurrences. However, when the symptoms are severe enough to disrupt normal functioning then the condition is termed as premenstrual syndrome (PMS) and mastalgia. An estimate suggests that 30 to 70% of all women experience mastalgia at some point in their life[1]. Neuroendocrine factors like serotonin (SHT) or endorphin deficiencies are considered to be responsible[2].

Various substances have been used to manage this condition. Progesterone, bromcocriptine, testosterone and estrogen have been used to modulate endocrine function but have no proven role[3]. To date the most effective technique to treat cyclic mastalgia and PMS has been suppression/ elimination of ovarian cycle which may be achieved by high dose estrogen, continuous combined oral contraceptive usage, GnRH and danazol.

Estrogen increases the risk of endometrial hyperplasia and combined oral contraceptive pills usage has yielded unequivocal results. The GnRH agonists are effective but menopausal symptom and effects are too high for long term use to be acceptable. Danazol has been used in studies for treatment of PMS and cyclic mastalgia for short period of time. Masculinizing effect can be significant including voice changes, hirsutism and potential weight gain along with subtle effects on plasma lipids leading to increase risk of cardiovascular disease. Use of danazol in the luteal phase of the menstrual cycle causes effective relief of symptoms of PMS and cyclic mastalgia. We have used danazol 200 mg only in the luteal phase of menstrual cycle as a treatment of premenstrual syndrome and premenstrual mastalgia.

The objective of the study was to see the efficacy of low dose danazol (200mg daily) in the treatment of PMS and cyclic mastalgia.

PATIENTS & METHODS

PMS was defined as recurrence of symptoms (somatic, psychological or behavioral) in the premenstrual phase of menstrual cycle in at least 4 of the 6 previous menstrual cycle including the most recent.

Inclusion Criteria: Patients who have recurrence of symptoms (somatic, psychological or behavioral) in the premenstrual phase of menstrual cycle in at least

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4 of the 6 previous menstrual cycle including the most recent.

Exclusion Criteria

- Age less than 18 years and more than 45 years
- Weight less than 45 kg or more than 110 kg
- Patients who do not want hormonal treatment
- Pregnant patients
- Patients who had known sensitivity to danazol or had taken danazol in the previous 3 months for other reasons
- Women who were taking oral contraceptives, anticoagulant or corticosteroids
- Patients in whom hormonal treatment was contraindicated

MATERIALS & METHODS

This study was carried out at Ghurki Trust Teaching Hospital Lahore for a period of 8 months from January 2014 to August 2014 (both inclusive).

After confirmation of eligibility patients were asked to fill-in a questionnaire regarding the severity of their symptoms. They were then given prescribed danazol 200mg once daily in the luteal phase of the cycle (day 14-28) for three months. They were assessed after one cycle of treatment and 3 cycles of treatment. They were asked to fill-in the same proforma showing improvement or no improvement in their symptoms. The answers were quantified and analyzed.

Thirty patients were included in the study. All were physically and mentally fit as determined by the screening process, had regular menstrual cycles and met the inclusion criteria. Questionnaire was administered for depression (depressed or happy), irritable and calm, anxiety (anxious or relax), bloatedness (bloated or thin), mastalgia (severe breast discomfort or comfortable breast), and global symptoms. Global symptoms were assessed by a specific questionnaire to what extent is PMS type symptoms bothering you today.

RESULTS

Subjective improvement in the symptoms of breast pain was seen in 22 out of 30 patients (73.3%). Thirteen patients reported less mood disturbance (43.3%). Feeling of bloating was improved in 20 patients (66.6%).

DISCUSSION

Danazol has been previously reported to be effective as a treatment both for PMS and in particular premenstrual mastalgia, when given at doses of 400mg or 200mg continuously. These doses are associated with significant adverse side effects. The efficacy of danazol is considered to be suppression of ovulation[4]. Danazol is reported to prevent mid cycle surge of FSH and LH & subsequently decrease the secretion of estrogen and progesterone. An optimum treatment of PMS and cyclic mastalgia can be 200 mg danazol daily for the luteal phase only. Similar results have been reported by Sarno et al[5]. In the present study it is also been shown that danazol was effective in the relief of cyclic mastalgia when given in the luteal phase only. This dosage regimen does not produce any side effect virtually and dropout rate from this study was negligible. The pharmacological mechanism responsible for this effect is uncertain and is believed to be direct action of danazol on the breast issue.

Breast pain and breast swelling are frequent symptoms of PMS and 60% of women report these symptoms[6]. The pain progressively worsens in the luteal phase and is released by onset of menstruation[6]. It is postulated that danazol given in the luteal phase reduces the amount of circulating progesterone and hence can relieve breast discomfort. Ueki et al[7] had demonstrated reduction in serum progesterone with a use of danazol.

Although the mechanism of relief of breast symptoms by use of low dose danazol in the luteal phase is not understood completely, however it does warrant a separate study in which patients should be included specifically on the basis of premenstrual mastalgia. Low dose danazol to relieve mastalgia should be studied and assessed in a larger study.

In addition the number of patients in this study is small and hence further studies need to be carried out to determine the effect of low dose danazol on lipid profile.

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