

Is dosage of hormone replacement therapy related with endometrial polyp formation?

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Summary

Purpose of investigation: to evaluate the effect of different doses of hormone replacement therapy (HRT) on endometrial polyp formation.

Methods: 398 menopausal women were initially evaluated through transvaginal ultrasound and patients who already had endometrial polyps were excluded from the study. One hundred and six (26.6%) eligible patients were enrolled and randomized into two groups of 53 patients to receive two different doses of HRT.

Results: six patients with endometrial polyps were detected in the first group and one patient in the second one ($p = 0.0502$ for total chi-square and $p = .1172$ for chi-square with continuity correction) after a mean duration of treatment of 26 months and 28,5 months, respectively. There was no difference in the mean number or the mean volume of the polyps between the two subgroups with positive results.

Conclusion: Our study showed that endometrial polyp formation may be related with HRT dosage.

Key words: Hormone replacement therapy (HRT); Endometrial polyp; Menopausal women.

Introduction

Polyp is a general descriptive term for any mass of tissue that projects outward or away from the surface of surrounding tissues. Benign endometrial polyps are common in the endometrial cavity at all ages but particularly at age 29-59, with their greatest incidence after age 50 [1].

Endometrial polyps may occur in association with endometrial hyperplasia [2] and the most serious concern about estrogen replacement is the occurrence of endometrial hyperplasia or cancer. The purpose of the study was to evaluate the effect of different doses of hormone replacement therapy (HRT) on endometrial polyp formation.

Materials and Methods

Three hundred and ninety-eight menopausal women were initially evaluated through transvaginal ultrasound and patients already having endometrial polyps were excluded from the study. Patients were also excluded from the study for any contraindications for HRT. One hundred and six (26.6%) eligible patients were enrolled and randomized into two groups of 53 patients to receive two different doses of HRT. Women enrolled in the study were informed of the possible benefits and complications of HRT. Two patients in the first group and one patient in the second group stopped treatment before the completion of two years and were excluded from the study. One patient in the second group was also excluded from the study for matching reasons.

Finally, 51 patients were included in each group for analysis. Patients in the two groups were matched for age (± 2 years), parity (exact number), weight (± 5 kg) and years of menopause (± 1 year). The first group received Kliogest (2 mg estradiol + 1 mg norethisterone) and the second group ActiVelle (1 mg estradiol + 0.5 mg norethisterone) at least for two years continuously. At 24-28 months after initiation of treatment, patients were evaluated through transvaginal ultrasound and possible diagnosis of endometrial polyps was confirmed by hysteroscopic examination.

Results

Six patients with endometrial polyps were detected in the first group and one patient in the second one ($p = 0.0502$ for total chi-square and $p = .1172$ for chi-square with continuity correction) after a mean duration of treatment of 26 months and 28,5 months, respectively. Although this is a marginal difference, endometrial polyp formation may be related to HRT dosage.

There was no difference in the mean number or the mean volume of the polyps between the two subgroups with positive results.

No malignancy was detected in any of the patients after dilation and curettage in those with detected polyps.

In the first group, three patients stopped HRT after diagnosis, one patient switched to a different regimen and two patients continued with the previous regimen.

The patient detected in the second group switched to a different regimen.

Revised manuscript accepted for publication March 23, 2006

Discussion and Conclusion

Polyps can be diagnosed by a sonogram, hysterosalpingogram, or hysteroscopy [3]. Although endometrial polyps can be removed with blind curettage, many are missed. Therefore, known endometrial polyps (as in our study detected by sonogram) are more successfully treated with hysteroscopic guidance [4].

They are considered to be estrogen-sensitive and their response to estrogen is similar to that of the surrounding endometrium. Their association with other proliferative endometrial lesions, such as hyperplasia, is well recognized [1]. Progestins oppose the action of estrogen on the endometrium by reducing the number of estrogen receptors in glandular and stromal cells of the endometrium and through other actions [5]. Our study showed that endometrial polyp formation may be related with HRT dosage. Polyp detection resulted in discontinuation of treatment in some patients or change of the HRT regiment.

Although it seems logical that the opposite action of progestins to estrogens is "proportional" and the half dose of progestins is enough to oppose the action of the half dose of estrogens, **the double dose of estrogens could have a more potent action in polyp formation. If this is confirmed in further studies, it seems logical to further increase the progestin dose.**

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