



Desogestrel versus gestodene in oral contraceptives: influence on the clinical and histomorphological features of benign breast disease

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(Accepted 2 February 1994)

Abstract

Forty-four female volunteers asking for oral contraception, affected by symptomatic benign breast disease (BBD) were evaluated to compare the effects on mastalgia and breast nodularity of two different low dose oral contraceptives (OCs), containing 200 µg ethinylestradiol + 150 µg desogestrel (EE+D) and 30 µg ethinylestradiol + 75 µg gestodene (EE+G), respectively. Physical examination, bilateral thermography, X-ray and/or ultrasonography of breast, and needle and screw-needle biopsies of mammary tissue were performed in all patients before OCs administration and after six cycles of treatment. OCs administration caused an overall improvement of mastalgia in 53%. Breast nodularity improved only in 8% of patients in both groups. Epithelial tissue modifications in mammary biopsies were observed, with involutive and/or secretory histomorphological and ultrastructural changes, frequently coexisting in different areas of the same breast.

Key words: Low dose oral contraceptives; Benign breast disease; Breast histology and ultrastructure

1. Introduction

The combined estrogen-progestogen oral contraceptives (OCs) have been in use for over 30 years, but it is still unclear what effect they could have produced on the breasts of the women who have been taking them for a long period of time. The apparent paradox of the alleged negative influences of OCs on the normal mammary tissue [1–5] and of the therapeutic activity in patients with BBD [6–10] has not been resolved at all. Studies investigating the relationship between OCs use and the future risk of developing a BBD have been contradictory. Some epidemiological surveys pointed to a protective effect of OCs with respect to BBD, particularly in cases of fibrocystic disease and fibroadenoma, which was not confirmed in other studies. The protective

effect, however, seems to be closely related to the length of use of OCs and is apparently lost within a few months to 1 year after stopping treatment [2,11–14]. LiVolsi et al. [7], found that OCs decreased the frequency of fibrocystic breast disease only in women with minimal or absent epithelial atypia. Similarly, Pastides et al. [15], found that OCs protect only against the less atypical lesions in BBD. In contrast, Hsieh et al. [13], using the Black and Chabon classification system, found the protection from fibrocystic breast disease with OCs use to be greater in those women with a higher atypia score. Brinton et al. [12], and the Royal College of General Practitioners' Study [16] stressed that the lowest risk of biopsy-proven cystic disease was present in the women who had used the highest progestogen dose OCs: no association with estrogen dose or type was found. In contrast, Berkowitz et al. [9], found no decreased risk of benign breast disease in women using OCs containing 20–50 µg ethinylestradiol and 1–25 mg progestogen.

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