into the care of acne patients is reasonable and supported by multiple studies and widespread clinical experience.

D. Thiboutot, MD

Efficacy of an oral contraceptive containing EE 0.03 mg and CMA 2 mg (Belara®) in moderate acne resolution: a randomized, double-blind, placebo-controlled Phase III trial

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Background.—The study was conducted to assess the effects of the monophasic combined oral contraceptive containing ethinyl estradiol (EE) 0.03 mg and chlormadinone acetate (CMA) 2 mg (EE/CMA) on papulopustular acne of the face, décolleté (low neck) and back; on moderate comedonal acne of the face; and on seborrhea, alopecia and hirsutism.

Study Design.—Three hundred seventy-seven women were randomized (2:1) to receive EE/CMA ($n = 251$) or placebo ($n = 126$) for six medication cycles. Due to the placebo-controlled, double-blind design of the trial, condoms were supplied for contraception. The primary efficacy end point was defined as a reduction of at least 50% in the number of papules and/or pustules of the face from admission to Medication Cycle 6.

Results.—In total, 64.1% (161/251) of subjects treated with EE/CMA responded compared with 43.7% (55/126) of those taking placebo (p=.0001). The median reduction in papules/pustules on the face at Cycle 6 compared with admission was 63.6% (EE/CMA) compared with 45.3% (placebo group). For comedonal lesions of the face, the reduction in lesion numbers was 54.8% (EE/CMA) compared with 32.4% (placebo). Moderate papulopustular acne of the décolleté decreased by 92.9% (EE/CMA) vs. 50% (placebo group) and of the back by 86.0% and 58.3%, respectively. For these skin conditions, the p values for the relative difference between groups vs. baseline were <.05 at Cycles 3 and 6, in favor of EE/CMA. As part of a self-assessment rating, at least 70.5% (EE/CMA) vs. 41.3% (placebo) reported an at least satisfactory improvement of their moderate acne. Even 39.8% of women taking EE/CMA reported an "excellent improvement" or "complete resolution" of moderate acne compared with 12.7% taking placebo.

Conclusion.—In addition to its contraceptive efficacy described elsewhere, EE/CMA is an effective treatment for moderate papulopustular acne and other androgen-related skin disorders.

▶ Combination oral contraceptives are effective in the treatment of acne in female patients. This phase III study is the first to examine the effects of a monophasic oral contraceptive containing ethinyl estradiol (EE) (0.03 mg) and

chlormadinone acetate (CMA) (2 mg) EE/CMA on acne and seborrhea compared with placebo in large numbers of women. CMA is an antiandrogen with structural similarity to cyproterone acetate, each of which is available in Europe and other areas, but not in the United States. The data demonstrate superiority of EE/CMA over placebo in terms of reduction of inflammatory lesions and noninflammatory lesions with a significantly greater proportion of subjects in the EE/CMA arm achieving at least a 50% reduction in lesions. Improvements in seborrhea were also noted, but the numbers of women with hirsutism were small with some women demonstrating marked improvement. Overall, this agent is currently used in Europe for acne treatment, and these data support its superiority to placebo.

D. Thiboutot, MD

Efficacy of a combined oral contraceptive containing 0.030 mg ethinylestradiol/2 mg dienogest for the treatment of papulopustular acne in comparison with placebo and 0.035 mg ethinylestradiol/2 mg cyproterone acetate

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Background.—Acne is a multifactorial disease characterized by androgenic stimulation of sebaceous glands. Therefore, combined oral contraceptives (COCs) containing anti-androgenic progestogens are suitable candidates for acne treatment. This study aimed to show that a COC containing the anti-androgen dienogest (DNG) is superior to placebo and not inferior to a COC containing the potent anti-androgen cyproterone acetate (CPA) in improving mild to moderate acne.

Study Design.—Healthy women between 16 and 45 years old with mild to moderate facial acne were randomly assigned to receive ethinylestradiol (EE)/DNG ($n = 525$), EE/CPA ($n = 537$) or placebo ($n = 264$) for six cycles in a multinational, multicenter, three-arm, double-blind and randomized trial. The primary efficacy variables were the percentages of change (from baseline to cycle 6) in inflammatory and total lesion count and the percentage of patients with acne improvement according to the Investigator Global Assessment.

Results.—All primary analyses proved that EE/DNG was superior to placebo and non-inferior to EE/CPA ($p < .05$). For *inflammatory* lesions, the reduction ($\pm$SD) rates were $-65.6 \pm 29.9\%$ for EE/DNG, $-64.6 \pm 31.2\%$ for EE/CPA and $-49.4 \pm 41.0\%$ for placebo. For *total* lesions, the reduction rates were $-54.7 \pm 26.3\%$ for EE/DNG, $-53.6 \pm 27.5\%$ for EE/CPA and $-39.4 \pm 33.6\%$ for placebo. The percentages of patients with improvement of facial acne were 91.9% for EE/DNG, 90.2% for EE/CPA and 76.2% for placebo.

Conclusion.—EE/DNG was superior to placebo, in spite of the prominent placebo effects, and as effective as EE/CPA in the treatment of mild