RECALCITRANT NODULOCYSTIC ACNE IN BLACK AMERICANS: TREATMENT WITH ISOTRETINOIN

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The beneficial effects of isotretinoin (Accutane) on severe nodulocystic acne and significant clinical improvement with prolonged remission are well documented in the literature; however, the subjects in these clinical studies are invariably white. The purpose of this study was to evaluate the response of black patients with recalcitrant nodulocystic acne to isotretinoin treatment. Ten black patients, ranging in age from 17 to 34 years, were treated for nodulocystic acne with 1 mg/kg/d of isotretinoin for 20 weeks and followed for an additional six months. Of the ten patients, eight adhered to the treatment regimen and were still in remission six months after completion of isotretinoin therapy. The differences and similarities seen between black patients and white patients with nodulocystic acne are discussed.

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The beneficial effects of isotretinoin (Accutane) on severe nodulocystic acne and significant clinical improvement with prolonged remission are well documented in the literature.[1-3] The subjects in these clinical studies, however, are invariably white. This clinical study was conducted to evaluate the efficacy and side effects of isotretinoin treatment on recalcitrant nodulocystic acne in black patients. In addition to the stated purpose of this study, interesting differences and similarities in the manifestation of the disease and the response to treatment between the study subjects and the white patients with acne were noted.

METHODS

Ten black patients, ranging in age from 17 to 34 years, with severe nodulocystic acne were chosen for the isotretinoin treatment study. All patients had nodulocystic acne refractory to standard topical and systemic dermatologic preparations, including topical retinoic acid, benzoyl peroxide, and topical and oral antibiotics. For the duration of the study, all concomitant topical and systemic treatments were discontinued. Each patient was given 1 mg/kg/d of isotretinoin and lesions were physician-evaluated weekly for the first month, bimonthly the second month, once a month for the third, fourth, and fifth

months and the second and six months post-therapy. Pretreatment laboratory analyses were performed for the following: complete blood count with differential, platelet count, sedimentation rate, prothrombin clotting time, alkaline phosphatase, lactate dehydrogenase, total bilirubin, total protein, albumin, glucose, uric acid, electrolytes, BUN, creatinine, calcium, cholesterol, and triglycerides. A complete medical and acne history revealed nothing significant or abnormal in any of the study patients.

RESULTS

During the first two to four weeks of isotretinoin therapy, all study subjects experienced an excessive increase in the number and activity of nodulocystic lesions. This early onset flare, not generally seen in white patients, invariably occurred in the temporal and submandibular areas, which were often clinically devoid of lesions when therapy was initiated (Figure 1).

Among blacks, persistent and unsightly post-inflammatory pigmentary changes have accompanied previous therapeutic modalities. The resulting hyperpigmentation is often of greater cosmetic concern to the patient than the acne itself and may require extensive treatment. At the completion of this study, an absence of hyperpigmentation was observed in the areas of former nodulocystic lesions and in areas where it was noticeable before therapy. At the six-month follow-up visit, most patients had a slight return to diffuse hyperpigmentation, especially in those with residual, depressed scars (Figure 1, bottom, right).

None of the side effects encountered in this study were intolerable. They included cheilitis and dry nose, with occasional epistaxis, which were treated with hydration and topical hydrocortisone ointment. In addition, one of the patients complained of headaches during the first four weeks, which resolved when treatment with isotretinoin was discontinued.

Because of the drying and desquamative effects of isotretinoin, most patients acquired an ashen or grayish facial hue between the second and eighth week of therapy, which disappeared between the tenth and 16th week. The study subjects, however, did not experience marked erythema, either during therapy or post-therapy, as is often seen in white patients (Figure 2).

The average duration of complete clearing of acne lesions post-therapy was six months (the patients were not on any topical or systemic acne therapy during this time) (Figure 3). Recurrence was usually in the form of a solitary nodulocystic lesion or a few papules, which responded to topical therapy or intralesional injections of triamcinolone, 2 mg/mL. In all of the study subjects, one course of therapy with isotretinoin was found to be effective.

DISCUSSION

There have been discrepancies in the literature about the incidence of acne in blacks and whites. The authors agree with Hinrichsen and Ivy[4] and Hazen[5] that acne is equally common in both races. The study findings also support those of Wilkins and Voorhes[6] that nodulocystic acne is more common in whites than in blacks; however, the authors disagree with Wilkins and Voorhes concerning the distribution of nodulocystic lesions. Their study demonstrated that the frequency of back and chest involvement was approximately the same in both races. The authors' experience indicates that nodulocystic acne lesions in blacks are confined mostly to the face. Substantial truncal distribution, commonly found in white patients, rarely occurs in blacks. When present, other conditions that are present with back and chest lesions should be explored diagnostically. These include steatocystoma multiplex, sarcoidosis, and epidermal cysts. In addition, studies by the authors indicate that the average age of onset of acne is slightly older in black patients.

Patient compliance may be jeopardized by early onset flare-ups. For this reason, patients were counseled initially and were told that they may notice new lesions, old lesions may enlarge, the skin may get an ashier look, and their skin will become very dry, and that this increased activity is temporary and does not preclude a successful outcome. A review of what this outcome will be, especially when supported with photographs, serves to bolster the patient's faltering motivation.

Resolution of the nodulocystic condition and hyperpigmentation triggered a tremendous psychological change in the study patients. There was dramatic improvement in self-esteem and social interactions, providing an additional benefit both to the patient and the physician.

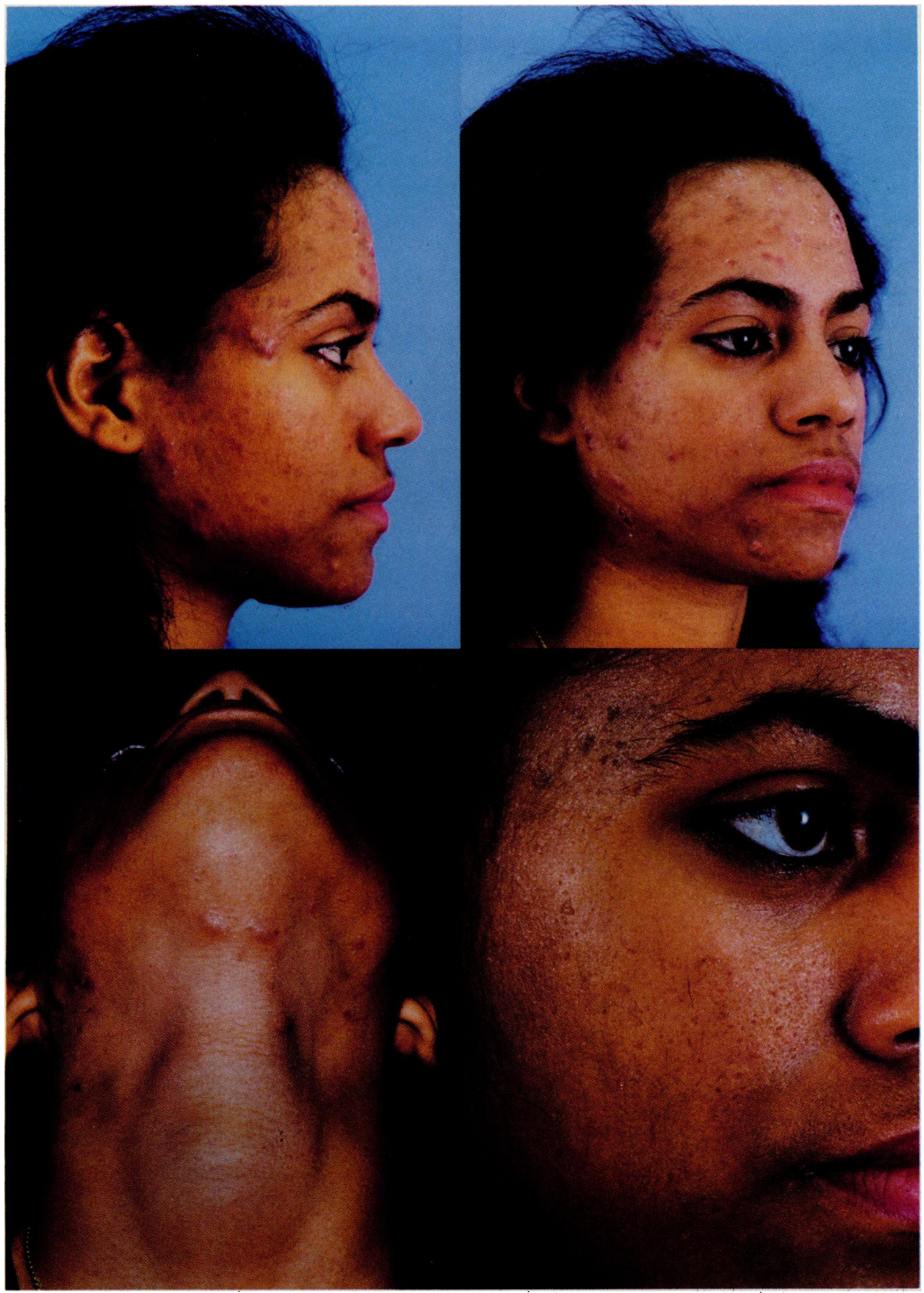

Figure 1. Patient 1. Right side of face at start of the isotretinoin therapy (top, left). Right side of face (top, right) after four weeks of isotretinoin therapy showing nodulocystic lesions that were not present when therapy was initiated. Submandibular area (bottom, left) after four weeks of isotretinoin therapy showing nodulocystic lesions that were not present before therapy. Right side of face (bottom, right) six months after completing the isotretinoin study without acne therapy

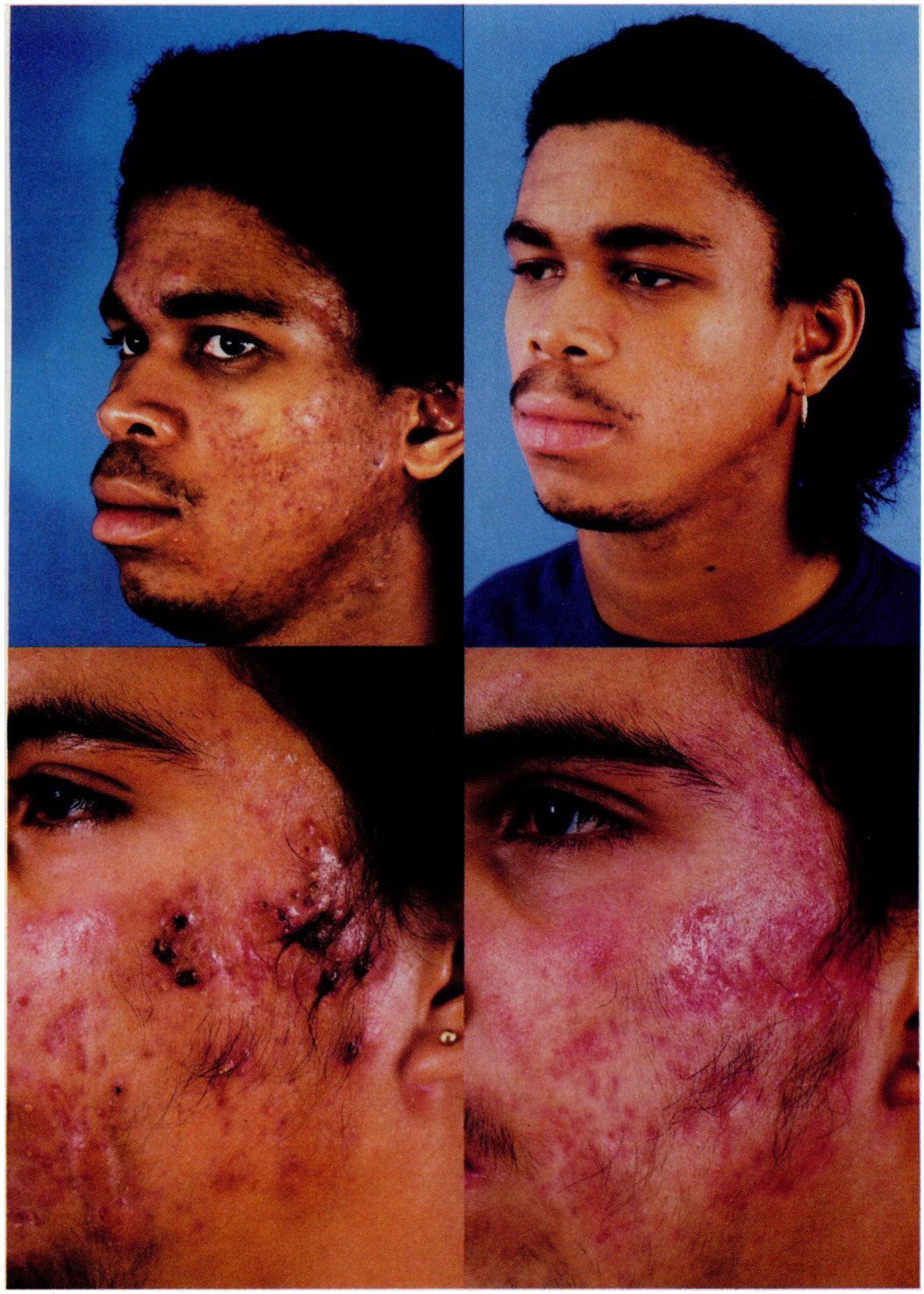

Figure 2. Patient 3. Left side of face (top, left) at the start of isotretinoin therapy. Left side of face (top, right) after 20 weeks of isotretinoin therapy. Acne lesions have resolved without residual erythema. Left side of face of a white patient (bottom, left) at the start of isotretinoin therapy. Left side of face of a white patient (bottom, right) after 20 weeks of isotretinoin therapy. Active acne lesions have resolved but the patient has residual erythema

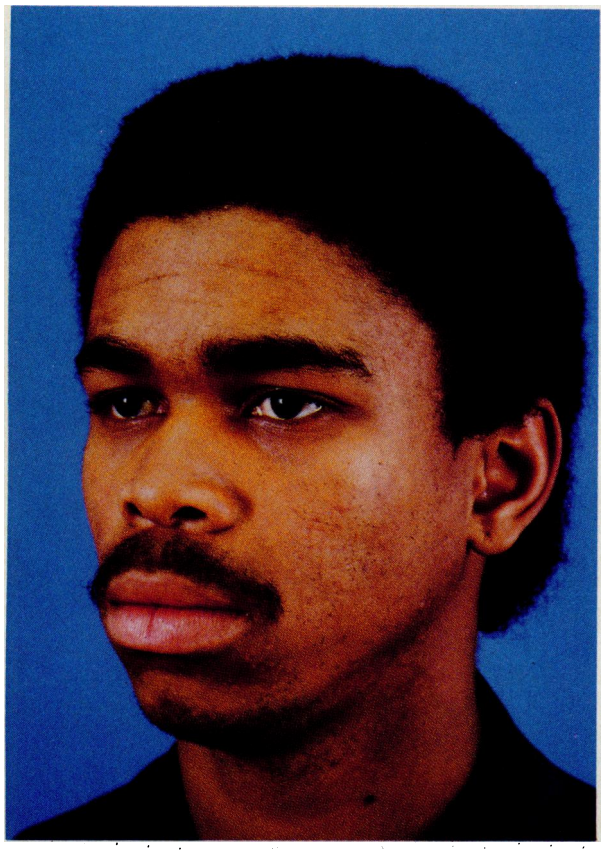

Figure 3. Patient 3. Left side of face six months after completing 20 weeks of isotretinoin therapy and without interim topical or systemic acne therapy

The authors conclude that isotretinoin is as safe and effective in the black patient with acne as it is in the white patient with acne. An additional benefit in black patients was the prevention of new, and repression of old, post-inflammatory hyperpigmentation.

Acknowledgment

Consent was obtained from the subjects illustrated in Figures 1 to 3 of this article. Roche Laboratories furnished the isotretinoin used in this study.

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