Acta Derm Venereol 2010; 90: 409–444

LETTERS TO THE EDITOR

Treatment of Extrafacial Rosacea with Low-dose Isotretinoin

Öznur Bostanci[1#], Claudia Borelli[2#] and Martin Schaller[1]*

*Department of Dermatology, [1]Eberhard Karls University, Liebermeisterstr. 25, DE-72076 Tübingen, and [2]Ludwig-Maximilians-University, Munich, Germany. *E-mail: martin.schaller@med.uni-tuebingen.de*

Accepted March 18, 2010.

[#]The first two authors contributed equally and should be considered as first authors.

Rosacea is a common condition that is chronic in the adult population. Symptoms usually begin in the age range 30–40 years, and are characterized by centrofacial erythema and marked telangiectasias (1) with papules, pustules and, occasionally, nodules or cysts on the forehead, cheek and nose (2).

Extrafacial rosacea has been very rarely reported in the literature (3–7). It predominantly affects men and is more difficult to diagnose because of its atypical pattern. In men, extrafacial rosacea is usually found in sun-exposed skin. Scalp involvement is predominantly pustular. The aims of this retrospective investigation were to evaluate which areas are affected by extrafacial rosacea, whether a low-dose isotretinoin regimen is effective, and whether the side-effects can be minimized.

METHODS

The study population comprised 8 men with extrafacial rosacea treated with isotretinoin in our hospital during the period 2004 to 2009. Diagnosis of extrafacial rosacea was confirmed by typical clinical presentation and, in patients 7 and 8, was supported by histology. The mean age of the patients was 62 years. The isotretinoin dosage was 10 mg/day in patients < 85 kg body weight, and 20 mg/day in patients > 85 kg body weight. Patients were treated by off-label, compassionate drugs in a case series, and not in a formal trial.

Monitoring was performed at the start of the treatment and once a month, including leukocyte differential counts (normal range of white blood cell count: 4000–10000/µl, lymphocytes: 20–45%, eosinophils: 0–4%), liver function tests (normal range of glutamic-oxaloacetic transaminase: maximum 35 U/l, and glutamic-pyruvic transaminase: maximum 34 U/l, γ-glutamyl transferase: maximum 40 U/l, alkaline phosphatase: 35–105 U/l) serum creatinine (normal range 0.5–0.8 mg/dl), and lipid profile (normal range of cholesterol: 100–200 mg/dl, triglyceride: 0–200 mg/dl).

The clinical outcome was assessed as "0 = no improvement", "+ = slight to moderate improvement", "++ = marked improvement" or "+++ = cleared".

RESULTS

Eight patients completed at least 2 months of therapy (Table I). No patient discontinued isotretinoin because of clinical side-effects. All patients showed marked improvement and one patient cleared completely (Fig. 1). The time at which improvement in extrafacial rosacea began varied individually. In general, improvement was observed after 4–8 weeks. Three patients developed a transient mild increase in cholesterol and triglyceride levels. One developed a transient increase in creatinine, while another showed an increase in γ-glutamyltransferase. None of these blood changes necessitated discontinuation of therapy.

DISCUSSION

Rosacea is a common skin disorder that is generally localized on the face, in particular the convex areas, typically sparing the periocular and perioral regions. Diagnosing rosacea is usually straightforward, but when the affected area is atypical, for example the scalp, neck, chest, and upper back, diagnosing extrafacial rosacea may be problematic. The morphology of extrafacial rosacea is similar to that of classical centrofacial rosacea; however, the granulomatous variant characterized by papules and monomorphic nodules seems to be more common in extrafacial lesions (8).

Extrafacial rosacea has only been reported anecdotally, but it seems to be very rare and no reproducible

Table I. Patient characteristics and therapeutic effects of isotretinoin in 8 men with extrafacial rosacea.

Pat. No./ Age (years)	Manifestations	Treatment (months)	Maximum dose (mg)	Response to isotretinoin/ Relapse-free period (months)	Side-effects	Previous therapies
1/64	Scalp	2	10	+++/13	No	Doxycycline
2/76	Neck, shoulder, upper arms	3	20	++/12	No	No
3/69	Scalp, chest	7	10	++/15	No	Minocycline
4/75	Scalp, neck, retroauricular, face	5	10	++/8	No	Minocycline, erythromycin cream
5/46	Chest, face	10	10	++/ no follow-up	Dry skin and lips	Tetracycline, isotretinoin cream
6/34	Neck, face	3	10	++/no follow-up	No	Steroid cream
7/52	Scalp, face, eye	3	10	+++/6	Dry lips	Minocycline
8/80	Scalp, face, neck, chest	3	20	+++/8	No	Antibiotics

0 = no improvement; + = slight to moderate improvement, ++ = marked improvement, +++ = cleared

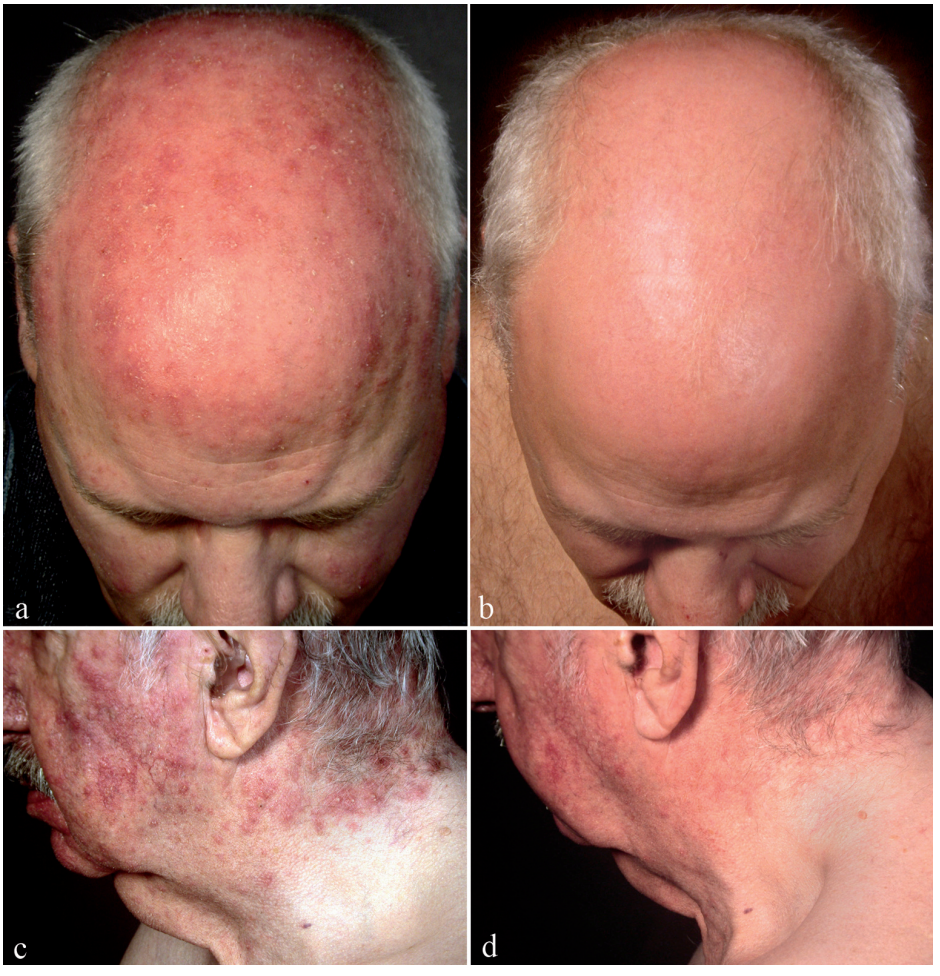

Fig. 1. Complete clearance of extrafacial rosacea after therapy with isotretinoin. (a, b) Patient 7, (c, d) patient 8.

effective treatment has been established (3, 4). The exact aetiopathogenesis of extrafacial rosacea is unknown, but extrafacial lesions usually complicate more serious cases of rosacea, and these generally arise in areas of chronic solar lesions or flushing. Isotretinoin is a well-known treatment option in severe cases of rosacea because of its potent anti-inflammatory and sebum-suppressive effects (9–11). The efficacy and relapse rates of low-dose isotretinoin in mild-to-moderate grades of acne is comparable with the standard regimen (1 mg/kg/day), but with a lower incidence of side-effects. We therefore initiated this study to analyse the efficacy of low-dose isotretinoin in more severe forms of extrafacial rosacea.

Based on this rationale and reports, we reviewed 8 consecutive patients who had received isotretinoin for extrafacial rosacea. All patients tolerated treatment very well and their condition improved. The frequency of side-effects under low-dose therapy was strongly reduced compared with the published data for higher dose regimes.

Thus, long-term treatment with very low-dose isotretinoin seems to be more effective than short-term high-dose treatment. Larger controlled prospective studies are needed to investigate the ideal treatment regimen and to determine the effectiveness of isotretinoin in patients with facial and/or extrafacial rosacea.

The authors declare no conflict of interest.

REFERENCES

1. Sobottka A, Lehmann P. Rosacea 2009: New advances in pathophysiology, clinical staging and therapeutic strategies. Hautarzt 2009; 60: 999–1009.
2. Gauwerky K, Klovekorn W, Korting HC, Lehmann P, Meigel EM, Reinel D, et al. Rosacea. J Dtsch Dermatol Ges 2009 [Epub ahead of print].
3. Ayres S Jr. Extrafacial rosacea is rare but does exist. J Am Acad Dermatol 1987; 16: 391–392.
4. Dupont C. How common is extrafacial rosacea? J Am Acad Dermatol 1986; 14: 839.
5. Haugstvedt A, Bjerke JR. Rosacea fulminans with extrafacial lesions. Acta Derm Venereol 1998; 78: 70–71.
6. Pereira TM, Vieira AP, Basto AS. Rosacea with extensive extrafacial lesions. Int J Dermatol 2008; 47: 52–55.
7. Rockl H, Schropl F, Scherer M. Rosacea with extrafacial localization. Hautarzt 1969; 20: 348–351.
8. Helm KF, Menz J, Gibson LE, Dicken CH. A clinical and histopathologic study of granulomatous rosacea. J Am Acad Dermatol 1991; 25: 1038–1043.
9. Erdogan FG, Yurtsever P, Aksoy D, Eskioglu F. Efficacy of low-dose isotretinoin in patients with treatment-resistant rosacea. Arch Dermatol 1998; 134: 884–885.
10. Hofer T. Continuous 'microdose' isotretinoin in adult recalcitrant rosacea. Clin Exp Dermatol 2004; 29: 204–205.
11. Palmer RA, Sidhu S, Goodwin PG. 'Microdose' isotretinoin. Br J Dermatol 2000; 143: 205–206.