

Pfizer, Valeant, Taro, AbbVie, Cosmederm, Anacor, Astellas, Janssen, Lilly, Merck, Merz, Novartis, Regeneron, Sanofi, Novan, Parion, Qurient, National Biological Corporation, Caremark, Advance Medical, Sun Pharma, Suncare Research, Informa, UpToDate, and National Psoriasis Foundation and he is founder and majority owner of www.DrScore.com and founder and part owner of Causa Research, a company dedicated to enhancing patients' adherence to treatment.

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REFERENCES

1. Tschen E. Addressing patient variability: clinical challenges in the initiation of acne treatment. *Cutis*. 2008;82(2 Suppl 1):9-17.
2. Nadeau R, Cloutier E, Guay J-H. New evidence about the existence of a bandwagon effect in the opinion formation process. *Int Polit Sci Rev*. 1993;14(2):203-213.
3. Clasen DR, Brown BB. The multidimensionality of peer pressure in adolescence. *J Youth Adolesc*. 1985;14(6):451-468.
4. Sherif M. A study of some social factors in perception. *Arch Psychol*. 1935;187:60.
5. Deutsch M, Gerard HB. A study of normative and informational social influences upon individual judgment. *J Abnorm Psychol*. 1955;51(3):629-636.

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Mucocutaneous adverse effects of the genital and perianal skin from isotretinoin therapy



To the Editor: Mucocutaneous adverse effects from isotretinoin therapy are common and dose dependent. Cheilitis and xerosis are frequently reported and routinely monitored. Adverse effects such as dermatitis, fissures, and bleeding affecting the genital and perianal skin are, however, uncommonly reported in the literature.¹⁻⁴ Consequently, they may not be pointed out to patients by clinicians. In a questionnaire-based study, we evaluated the presence of these symptoms in a cohort of patients receiving care in our department. Ethics approval was obtained. Inclusion criteria included age older than 16 years and a minimum of 3 months of isotretinoin treatment.

Eighty patients completed the questionnaire from April 2017 through July 2017. Fifty were female. The average age of respondents was 24 years (range, 17-48 years). The average dose at the time of completion of the questionnaire was 0.7 mg/kg (range, 0.2-1 mg/kg), with an average cumulative dose of 6 g (range, 1.68-14.4 g).

Of the female respondents, 40 (80%) reported being sexually active. Sixteen patients (32%) reported vulval dryness on treatment, resulting in vulval discomfort in 11 (22%). Ten (20%) patients reported dyspareunia, leading to the avoidance of intercourse in 8. Nine (18%) patients reported intermenstrual bleeding, of whom 3 also reported intracoital bleeding. Five (10%) patients reported vulval fissures, and 12 (24%) reported the new or increased need for lubricating agents. Of 20 patients who reported any vulvovaginal symptoms, 18 had responded that they were sexually active. Sixteen of 80 (20%) patients reported perianal dermatitis, 21 (26%) reported fissures, and 16 (20%) reported perianal bleeding on treatment. Fourteen female and 8 male patients had reported a pretreatment history of dry skin and/or eczema.

With multiple linear regression modeling, a pre-existing diagnosis of dry skin and/or eczema did not seem to confer an increased risk for the development of these symptoms. There was a causal association between higher daily doses (>50 mg) and cumulative doses (>6000 mg) and incidence of vulval dryness, vulval fissures, and perianal dermatitis and between higher doses and perianal fissures and bleeding (but not higher cumulative doses). However, further analysis of these associations in larger numbers is required.

Mucocutaneous adverse effects from isotretinoin result from the shrinkage of sebaceous glands, increased transepidermal water loss, skin barrier dysfunction, and abnormal epidermal lipid production. Sebaceous glands, occurring on both hair-bearing and glabrous genital skin, have an important role in lubrication and protection, as well as in wound healing. Isotretinoin therapy leads to xerosis and increased skin fragility and susceptibility to injury from frictional forces. The findings of our study suggest that symptoms relating to these effects on genital and perianal skin are common. Limitations of this study, however, include small numbers, subjective reporting of symptoms without examination, and no assessment of other potential contributing factors or etiologies. It is our experience with prescribing isotretinoin, as can be the case with other dermatoses that can affect the genital skin, that patients often do not voluntarily report such symptoms.⁵ Given the nature of these symptoms and an

often adolescent patient population, it would be prudent to include any preventative and management advice in all relevant information leaflets.

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REFERENCES

1. Erpolat S, Gorpelioglu C, Sarifakioglu E. Isotretinoin associated anal fissure and rectal bleeding: a rare complication. *Int J Dermatol.* 2012;51(3):358-359.
2. Topal IO. Dyspareunia and vaginal bleeding associated with isotretinoin: a rare complication. *J Sex Med.* 2013;10(10):2604.
3. Radmanesh M. Anal fissure, rectal bleeding and proctitis as complications of systemic isotretinoin therapy: report of two cases. *J Eur Acad Dermatol Venereol.* 2006;20(10):1394.
4. Gungor S, Gokdemir G. Anal fissure and rectal bleeding as a complication of systemic isotretinoin therapy: dermatologists know this side-effect, what about proctologists? *Colorectal Dis.* 2013;15(9):1187-1188.
5. Meeuwis KA, van de Kerkhof PC, Massuger LF, de Hullu JA, van Rossum MM. Patients' experience of psoriasis in the genital area. *Dermatology.* 2012;224(3):271-276.

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Instagram for dermatology education



To the Editor: Physicians are increasingly using social media as an education platform. A notable example is a recent article by dermatopathologists on the use of social media for pathologists.¹ Instagram, a social media platform with more than 1 billion users, has emerged as a preferred site for posting images (vs text) and for younger demographics.² In the field of dermatology, Instagram has been primarily used for

Table I. Demographics of @globaldermie Instagram followers

Demographics	No. (%) (N = 543)
Race/ethnicity (n = 539)	
White or Caucasian	312 (57.9)
Hispanic or Latino	77 (14.3)
Asian or Asian American	75 (13.9)
Black or African American	26 (4.8)
American Indian or Alaskan Native	2 (0.4)
Other/prefer not to say	47 (8.7)
Education (n = 522)	
Postgraduate degree	239 (45.8)
In postgraduate school	63 (12.0)
College degree	117 (22.4)
In college	46 (8.8)
High school diploma or GED	20 (3.8)
Other	37 (7.1)
Profession (n = 537)	
Dermatologist (training complete)	73 (13.6)
Dermatology resident or fellow (trainee)	91 (16.9)
Nondermatology physician (training complete)	47 (8.6)
Nondermatology resident or fellow (trainee)	48 (8.9)
Nurse practitioner or physician assistant	35 (6.5)
Nurse practitioner or physician assistant (trainee)	13 (2.4)
Nurse	49 (9.1)
Nurse (trainee)	14 (2.6)
Medical student	50 (9.3)
Premedical student	15 (2.8)
Nonmedical	102 (19.0)
Geographic residence (n = 521)	
North America (Canada and USA)	279 (53.6)
Latin America*	76 (14.6)
Europe [†]	65 (12.5)
Asia [‡]	36 (6.9)
Africa [§]	11 (2.1)
Middle East	41 (7.9)
Australia and New Zealand	13 (2.5)

GED, General Educational Development test, American Council on Education, Washington, DC; USA, United States of America.

*Includes Argentina, Bahamas, Brazil, Chile, Columbia, Costa Rica, Dominican Republic, Ecuador, Honduras, Panama, Paraguay, Peru, and Venezuela.

[†]Includes Albania, Austria, Bulgaria, Croatia, Denmark, England, Estonia, France, Georgia, Germany, Greece, Hungary, Italy, Latvia, Macedonia, Netherlands, Norway, Poland, Romania, Russia, Scotland, Serbia, Spain, Sweden, Switzerland, and Ukraine.

[‡]Includes India, Indonesia, Malaysia, Pakistan, Philippines, and Singapore.

[§]Includes Ethiopia, Morocco, Nigeria, Senegal, Somalia, South Africa, and Sudan.

^{||}Includes Bahrain, Iran, Iraq, Israel, Kuwait, Lebanon, Oman, Saudi Arabia, Turkey, and United Arab Emirates.