

Rituximab had been used for pemphigus and other AIBDs at our institution in > 20 patients since 2008. From 2008 to mid-2019, only two patients had experienced documented reactions, compared with the present finding of five consecutive patients in 3 months. This spike coincided with change of MabThera to the biosimilar Riximyo as the default medication to be administered; subsequent local policy change ensured that patients with AIBD will receive only MabThera. These reactions were reported to the Therapeutic Goods Association. A quality assurance investigation performed at the formulation centre did not find any errors.

Riximyo was first approved by the Australian Pharmaceutical Benefits Advisory Committee in March 2018. Its safety and efficacy was based on two major studies on RA and advanced stage follicular lymphoma, not pemphigus.² Underlying disease qualities may mean that biosimilars behave unequally, and extrapolation to different indications might not be justified. For example, the infliximab biosimilar CT-P13 induced higher frequencies of anti-drug antibodies in RA compared with ankylosing spondylitis.³

A 1-year study in Tehran examined the rituximab biosimilar Zytux (Aryogen Pharmed, Tehran, Iran) and found that in 110 patients, 30% experienced adverse reactions, the most common of which were infusion reactions.⁴ In India, 10 of 146 patients who received a rituximab biosimilar experienced an adverse event, five of which were urticarial rashes, while five had severe reactions.⁵ None of these were back-to-back comparisons and these groups had both rituximab-naïve and rituximab non-naïve patients.

Although there are stringent and robust tests to 'prove' bio-equivalence (e.g. antigen binding tests), no gold standard exists that measures variability between two agents, including issues with interchanging, manufacturing and pharmacodynamic/pharmacokinetic differences. As the uptake of biosimilars increases, especially for rare diseases such as pemphigus, clinicians should be educated and aware of the fundamentals behind biosimilars. Controlled trials between biosimilars and original biologics could be considered in new indications, as well as pharmacovigilance.

G. Ho,¹ T. Sheriff,^{1,2} M. Doria-Ruiz,² Y. Loh³ and D. F. Murrell^{1,2,4}

¹Departments of, Dermatology, St George Hospital, Sydney, NSW; ²University of New South Wales, Sydney, NSW, Australia; ³Cancer Care Centre, St George Hospital, Sydney, NSW, Australia and ⁴The George Institute for Global Health, Sydney, Australia
E-mail: d.murrell@unsw.edu.au

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Mask-related acne in the COVID-19 pandemic: an analysis of Twitter posts and influencers

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Widespread use of facial masks during the COVID-19 pandemic has been linked to the development of acne breakouts, frequently referred to as 'maskne'.^{1,2} Social media platforms, including Twitter, have previously been shown to inform patient perceptions regarding acne.³ Given the growing influence of social media in providing health information,^{3,4} we sought to characterize Tweets about mask-related acne to better recognize the distribution of potential influencers and the role of dermatologists in supplying education and guidance.

We conducted a retrospective analysis of English Tweets regarding mask-related acne posted in September 2020. This study utilized publicly available online data and did not qualify as human subject research, therefore institutional review board approval was not required at the University of Connecticut Health Center.

Analysed Tweets were 'high impact' (had at least one retweet) and novel (not posted more than once by the same author). Retweets were not considered. Author types and demographics were collected using available information on public Twitter profiles. Tweet content was assessed and categorized into several major groups (Table S1).

Most of the 690 Tweets analysed were by patients (68.8% compared with 31.2% from nonpatients).

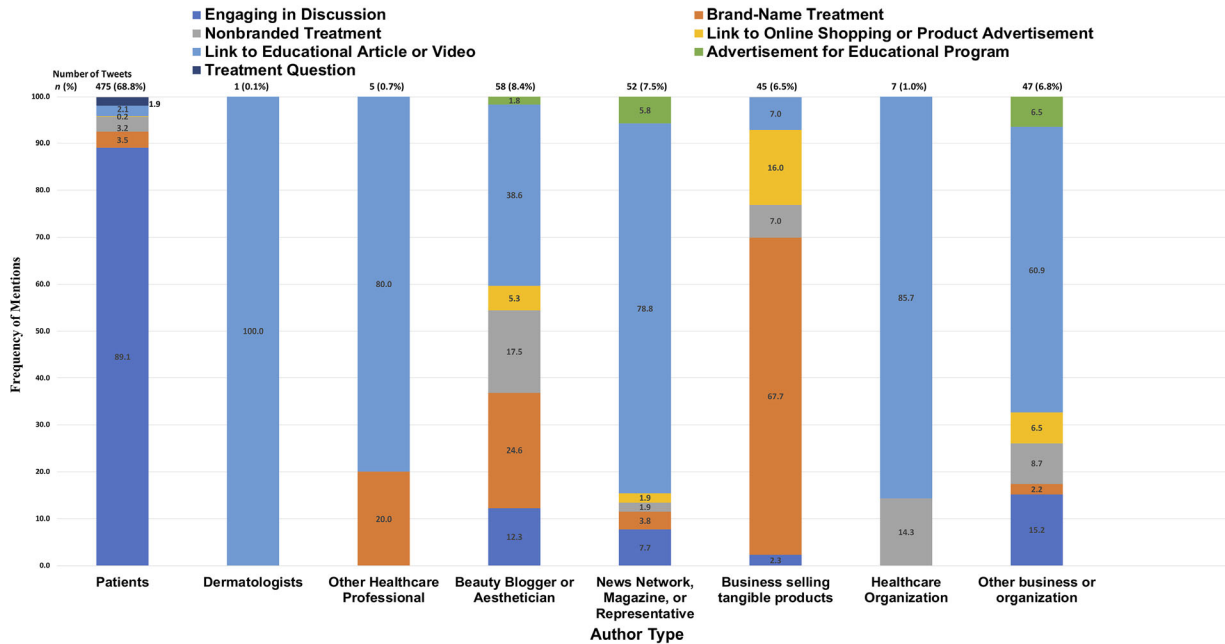


Figure 1 Overall volume, topic distribution and content of mask-related acne Tweets in September 2020, stratified by author type. For each author type, the total number of Tweets is denoted at the top of each bar in the figure. The distribution of Tweets is specifically delineated for each author type. Tweets were classified based on common ideas and themes, which are further described in Table S1.

Table 1 Demographic distribution of patient and nonpatient authors posting Tweets regarding mask-related acne.

	Patient Tweets, n (%)	Nonpatient Tweets, n (%)
Total Tweets	475 (100.0)	215 (100.0)
Demographic attribute		
Gender		
Male	56 (11.8)	5 (2.3)
Female	412 (86.7)	69 (32.4)
Genderqueer or nonbinary	2 (0.4)	1 (0.5)
Not available ^a	5 (1.1)	1 (0.5)
Not applicable ^b	0 (0)	139 (64.4)
Race		
White/Hispanic	313 (65.9)	30 (13.9)
Person of colour	146 (30.7)	42 (19.9)
Not available ^a	16 (3.4)	4 (1.9)
Not applicable ^b	0 (0)	139 (64.4)

All analysed Tweets were posted in September 2020. ^aThose that were difficult to ascertain using publicly available information; ^bpertaining to Twitter accounts of groups or organizations.

Healthcare providers and organizations (1.7%) and dermatologists (0.1%) accounted for a small portion of Tweets. Other nonpatient authors included beauty bloggers or aestheticians (8.4%), media networks and personnel (7.5%), and businesses selling tangible products (6.5%). Patients most frequently Tweeted complaints of or questions about mask-related acne (89.1%), whereas the majority of commercial business Tweets promoted

brand-name acne treatments or online shopping links (83.7%) (Fig. 1). Demographic characteristics of the sample of influencers and patients are delineated in Table 1.

The findings emphasize a shortage of educational Tweets regarding mask-related acne, which is important given the frequency with which patients expressed frustration with mask-related acne and sought management guidance. Although many healthcare professionals and health organizations posted links to educational videos, these individuals were overall under-represented in the sample of influencers. Beauty bloggers, aestheticians and news networks are likely to play an educational role through their overall Tweet volume and frequent posting of informational materials and links. However, although these resources may be helpful, dermatologists and other healthcare professionals should be better suited to lead this conversation, given their experience and ability to differentiate mask-related acne from similar-appearing dermatological conditions.

Effective acne treatments, including retinoids, salicylic acid and benzoyl peroxide were occasionally discussed on Twitter. However, many remedies that do not appear in American Academy of Dermatology recommendations, such as turmeric masks, herpanacine supplements and essential oil concoctions, were also promoted.⁵ This may lead to confusion among patients, especially if they are unable to verify these recommendations with those from dermatologists or other healthcare professionals on social media. Additionally, commercial businesses mainly promoted brand-name acne products, which are probably

more costly than unbranded treatments and may not be the optimal treatment choice.

There are several limitations to this study, including the inability to definitively verify some author demographics. Additionally, this cross-sectional study of one time period may not reflect the distribution of mask-related Tweets earlier in the COVID-19 pandemic. As our understanding of mask-related acne continues to improve, the dermatology community should be encouraged to contribute its knowledge and recommendations regarding evidence-based practice through social media.

R. Drozdowski,¹ C. Gronbeck¹ and H. Feng²

¹University of Connecticut School of Medicine, Farmington, CT, USA and ²Department of Dermatology, University of Connecticut Health Center, Farmington, CT, USA

E-mail: haofeng625@gmail.com

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Supporting Information

Additional Supporting Information may be found in the online version of this article:

Table S1. Classification guidelines for mask-related acne Tweet content.

Smoking cessation outcomes in patients with hidradenitis suppurativa: a retrospective analysis

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Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease manifesting as recurrent abscesses and

nodules that may lead to fistulas, draining sinuses and scarring.¹ Smoking remains a significant issue among patients with HS, with an ongoing need for effective management to support smoking cessation. A meta-analysis found that patients with HS are four times more likely to be smokers than are controls without HS.² Nonsmokers have been previously shown to have a greater response to first-line medical therapy of HS compared with smokers.³ Additionally, smoking is often a relative contraindication to complex surgical intervention (e.g. flap reconstruction) for HS.

The aim of this analysis was to investigate smoking cessation outcomes in patients with HS. The study was approved for ethics by the Southern Adelaide Local Health Network Research Office.

A retrospective case note review was undertaken for patients seen in the multidisciplinary HS service at a tertiary hospital in South Australia between March 2019 and March 2020. Consenting patients had follow-up with individualized smoking cessation support from a pharmacist, including counselling and pharmacotherapy advice.

Table 1 Characteristics of patients, treatments and smoking cessation outcomes.

Characteristic	Result
Age of onset (years) ^a (<i>n</i> = 25)	25 ± 10
Disease duration, years (<i>n</i> = 22)	13 ± 7
Sex, <i>n</i> (%)	
Female	24 (77)
Male	7 (23)
Body mass index, <i>n</i> (%)	
Overweight or obese (≥ 25)	19 (61)
Diabetes mellitus, <i>n</i> (%)	2 (6)
Family history of HS, <i>n</i> (%)	9 (29)
Hurley stage, <i>n</i> (%) (<i>n</i> = 30) ^b	
I	6 (20)
II	12 (40)
III	9 (30)
Dermatology Life Quality Index (<i>n</i> = 19)	22 ± 12
Modified Sartorius score (<i>n</i> = 14)	25 ± 16
Initiation of biologic therapy, <i>n</i> (%)	7 (23)
Previous excision surgery, <i>n</i> (%)	7 (23)
Initial number of cigarettes smoked daily	12 ± 6
Final number of cigarettes smoked daily (<i>n</i> = 26)	8 ± 8
Pharmacotherapy for smoking cessation, <i>n</i> (%) (<i>n</i> = 30)	
Nicotine patch alone	4 (13)
Nicotine inhaler alone	1 (3)
Nicotine gum alone	1 (3)
Varenicline	2 (7)
Combination of pharmacotherapy	3 (10)
None	19 (63)
Reduction in smoking (daily cigarettes), <i>n</i> (%) (<i>n</i> = 26)	
25%	5 (19)
50%	2 (8)
75%	1 (4)
100% (ceased smoking)	6 (23)

HS, hidradenitis suppurativa. ^aData are mean ± SD unless otherwise stated; ^bthree patients (10%) had no active disease.