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Guselkumab in the treatment of hidradenitis suppurativa: A retrospective chart review

To the Editor: Hidradenitis suppurativa (HS) is a debilitating inflammatory skin disease that leads to abscesses, fistulas, and scarring. The only Food and Drug Administration–approved medication for HS is the tumor necrosis factor antibody adalimumab. An overactive T-cell helper 17 pathway is hypothesized to contribute to the development of HS, with high numbers of interleukin (IL) 23–expressing cells found in lesional skin.[1] Although ustekinumab, an IL-12p40 antibody with activity against IL-23, has been reported to improve HS, this report is the first to evaluate the use of a pure IL-23 antibody to treat HS.[2] A literature search conducted in November 2018 combining "hidradenitis suppurativa" and each of the IL-23 antibodies approved or studied for dermatologic diseases—"guselkumab," "tildrakizumab," "risankizumab," and "mirikizumab"—yeilded no results.

We present a retrospective chart review of 8 patients with moderate-to-severe HS who were treated with guselkumab 100 mg administered subcutaneously at weeks 0 and 4 and then every 8 weeks thereafter. Four patients (50%) had comorbid psoriasis, with 3 starting guselkumab for psoriasis. In 1 patient, HS developed after starting an anti–IL-17 agent; all other cases of HS were primary.

Demographic information and patient outcomes are shown in Table I. Patient ages ranged 15-68 years, with an average age of 32 years, and average weight was 98 kg. Five patients (63%) were male. Four patients (50%) had Hurley stage III disease, and 4 patients (50%) had Hurley stage II disease. Seven patients (88%) were previously treated with other biologics: 5 with adalimumab, 4 with secukinumab, 2 with ixekizumab, and 1 with ustekinumab. Five patients had prior treatment with oral antibiotics and 2 patients isotretinoin. Three patients (38%) continued antibiotics while on guselkumab. There are a total of 4.8 treatment years on guselkumab.

After treatment with guselkumab, 5 patients (63%) reported improvement in their HS and 1 patient's disease remained quiescent. Three patients who ultimately improved did not show improvement at 2-4 months. The drug was well tolerated in all patients.

Guselkumab might be effective for HS after other biologic treatment failures. Patients improved even without concurrent antibiotics. Limitations of our study include its small size, retrospective nature, the absence of a wash-out period, and the absence of standardized outcome measures. We have also found that patients might not improve in the first 2-4 months after treatment initiation, suggesting that more time might be needed to reach maximum efficacy. It is worth noting that our patients were treated with psoriasis-level dosing of guselkumab. It is possible that higher or more frequent doses would lead to greater or faster improvement. Studies on adalimumab have shown that weekly dosing is more effective for HS than the twice-monthly dosing indicated for psoriasis.[3] Guselkumab and other IL-23 antibodies present a new option for a disease with limited effective treatments and warrant further study to determine efficacy and optimal dosing.

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Table I. Patient demographics and treatment outcomes

Age, y	Sex	Weight, kg	Smoking history	Hurley stage	HS location	Psoriasis	HS treatments before guselkumab	Indication for guselkumab	Concurrent HS treatment	HS response* at first follow-up (no. months)	HS response* at most recent visit (no. months)
15	F	80	Never	II	Axillae, groin	No	Spironolactone, isotretinoin, antibiotics, adalimumab	HS	None	No response (3)	Improved (6)
54	F	79	Current smoker	II	Axillae, groin	Yes; plaque psoriasis.	Minocycline, ixekizumab, ustekinumab	Psoriasis	None	-	Remained clear (8)
32	F	86	Never	II	Axillae, groin, abdominal pannus, inframammary	Yes; plaque psoriasis	Topical antibiotics, ixekizumab	Psoriasis	None	No response (3)	Clear (8)
30	M	74	Current smoker	III	Axillae	Yes; inverse psoriasis	Adalimumab, secukinumab	HS	None	Improved (4)	-
29	M	96	Never	III	Axillae, groin, buttocks	No	Antibiotics, isotretinoin, adalimumab, secukinumab, skin grafts of axillae	HS	Doxycycline	No response (2)	Improved (4)
25	M	128	Never	II	Groin, buttocks	Yes; inverse psoriasis	None	Psoriasis	None	Improved (3)	Improved (9)
31	M	137	Ex-smoker	III	Axillae, groin, infrapannus, sacrum	No	Antibiotics, adalimumab, secukinumab, laser treatment	HS	Topical clindamycin	No response (2)	No response (10)
68	M	102	Current smoker	III	Axillae, groin, perianal	No	Antibiotics, adalimumab, secukinumab	HS	Doxycycline	No response (3)	No response (8)

HS, Hidradenitis suppurativa.
*Improvement as noted by clinical examination and by patient report.

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Inpatient dermatology consultations and the July effect: A retrospective cohort study

To the Editor: The July effect refers to the proposed adverse effect on patient care when new interns begin their training in teaching hospitals.[1-5] We sought to examine whether a July effect exists with regards to inpatient dermatology consultations at a large tertiary referral medical center, as measured by the concordance or discordance of assessments between the primary and consulting teams.

The Institutional Review Board at University Hospitals Cleveland Medical Center approved this study. We retrospectively reviewed inpatient dermatology consultations from resident teaching services during the months April-September of January 1, 2012-December 31, 2017. We recorded the primary team, training level of charting resident, follow-up, concordance or discordance of assessment between the primary and consulting teams, and whether an inpatient biopsy was performed. After reviewing consulting notes and diagnoses, we categorized consultations as concordant or discordant on the basis of the qualitative assessment of diagnoses and whether the consulting team agreed with the primary team's initial assessment. Descriptive statistics were performed by using the χ^2 test and t test. P values $<.05$ were considered statistically significant.

There were 446 inpatient dermatology consultations during April-June and 523 during July-September (Table I). Most consultations were placed by internal medicine teaching teams, and most of charting physicians were interns. There were no differences in the number of consultations or types of primary services between April-June and July-September ($P > .05$ for all). Interns wrote most notes in April-June and July-September ($P = .003$).

There was no difference in the concordance of assessments between dermatologists and primary teams during April-June and July-September (odds ratio [OR] 0.94, 95% confidence interval [CI] 0.70-1.28; $P = .73$). We saw a significant difference in concordance and discordance only in pediatric consultants during April-June ($P = .005$). In addition, no differences in concordance and discordance was observed by training level or primary service (Table II). Consultations with discordant assessments were associated with significantly more inpatient biopsies (OR 1.51, 95% CI 1.08-1.45, $P = .02$), but this finding did not differ by time of year (OR 1.07, 95% CI 0.79-1.45, $P = .67$).

Limitations of this study include insufficient documentation of dermatologic assessment and lack of follow-up. About a quarter of assessments could not be evaluated for concordance because there was no documentation of the primary team's assessment of the cutaneous findings. Moreover, the team member proposing the consultation was not documented in the chart, which could explain the findings of no July effect. As such, some consultations might have been requested by attending physicians or senior residents, but we were only able to attribute placement of a consult to the charting physician, most often an intern.

In summary, we did not find evidence of a July effect related to inpatient dermatology consultations as evidenced by no significant trend for discordant assessments. Discordant assessments between primary and consulting teams resulted in a significantly higher rate of inpatient biopsies regardless of time of year, demonstrating a role for inpatient dermatology consultations in managing difficult dermatologic conditions. Future studies should examine methods to improve dermatology education among various specialties to increase awareness of dermatologic conditions.

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