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Social support is associated with reduced impact of hidradenitis suppurativa on quality of life: an observational study

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To the Editor:

Patients with hidradenitis suppurativa (HS) have worse measured quality of life (QOL) and a higher prevalence of depression compared to patients with other dermatological conditions, such as chronic urticaria, psoriasis, and acne [1]. A strong social support structure may help patients adapt to life with disease [2]. Social support is considered an adaptive coping strategy while social withdrawal is considered a maladaptive strategy in HS [3]. However, knowledge on how social support is related to QOL in HS patients is limited. Our research group tested the hypothesis that social support is associated with quality of life of patients with HS.

We approached 153 patients (N=123 mail, N=30 clinic) 18 years and older diagnosed with HS (International Classification of Diseases 10th Revision [ICD10] code: L 73.2) at the Wake Forest Baptist

Health dermatology clinics between June and September 2018 after IRB approval was obtained. Surveys were mailed to HS patients seen at Wake Forest clinics who had a mailing address on file. A total of 67 responses (response rate (RR)=44%) were received (mail: N=40, RR=33%; clinic: N=27, RR=90%) were obtained and analyzed. Respondents reported social-support based on six questions from the Medical Outcomes Study Social Support Survey (MOS-SSS), (**Table 1**). Quality of life was assessed with the dermatology life quality index (DLQI), [7,8]. A lower MOS-SSS score correlates with worse social support and a higher DLQI score correlates with worse QOL [4,5]. Medical Outcomes Study Social Support Survey individual questions were scored whether the respondent had someone to provide social support none of the time (1), little of the time

Table 1: Frequency with which patients had someone to provide social support and their mean Dermatology Life Quality Index scores.

Social Support Questions	None to some of the time (mean DLQI)	Most to all of the time (mean DLQI)
Give you good advice about a problem	14.5*	10.1*
Count on to listen to you when you need to talk	17.3**	9.8**
Show you love and affection	17.9**	10.0**
Share your most private worries and fears with	18.3***	8.7***
Do fun things with	18.1***	9.6***
Love you and make you feel wanted	16.5*	10.5*

DLQI, dermatology life quality index

*P values represent t-tests between the sum and individual dermatology life quality Index scores for each patient response category. P-values are statistically significant per defined thresholds: * <0.05; ** <0.01; *** <0.001.

(2), some of the time (3), most of the time (4), or all of the time (5). Total MOS-SSS score was calculated using the average of the individual question scores. Subjects were stratified into two groups: high support (most or all of the time) and low support (none, little, or some of the time) for individual and total scores. Data were analyzed using the SAS Software 9.4. Differences in mean score were assessed using Student's t-test and simple linear regression was used to analyze associations.

Respondents were a mean age of 39 (range 18-73), 90% female, and 57% African American. Non-responders were a mean age 36, 80% female, 38% African American. Mean DLQI of all respondents was 12.4 (SD 8.6, very poor quality of life). Respondents with low total support scores had a higher DLQI (15.3), compared to high total support scores (9.2; $P < 0.01$). Total support was also correlated with DLQI ($R = -0.31$, $P < 0.001$).

Respondents with low support to give them good advice about a problem, listen to them when they need to talk, show love and affection, share most private worries and fears with, do fun things with, and love and make them feel wanted had higher DLQI scores than those with high support (**Table 1**).

Responses to each DLQI question were compared between patients who reported high versus low support (**Table 1**). Respondents with low support had worse QOL for feelings, daily activities, leisure, work and school, personal relationships, and treatment (**Table 1**).

Hidradenitis suppurativa is a debilitating disease and had a very large effect on QOL in our cohort [1]. Even

respondents who reported high social support experienced moderate effect on QOL. Although our study could not assess causality, weak social support was associated with greater disease burden. Weak social support may contribute to greater disease burden, or alternatively, worse HS could cause both social withdrawal and worse QOL.

Although our study was limited by a small cohort and low response rate, demographics of non-respondents were similar to respondents and the sample size was adequately large to detect differences between those with and without strong social support.

Potential conflicts of interest

Feldman has received research, speaking and/or consulting support from Eli Lilly and Company, GlaxoSmithKline/Stiefel, AbbVie, Janssen, Alovtech, vTv Therapeutics, Bristol-Myers Squibb, Samsung, Pfizer, Boehringer Ingelheim, Amgen Inc, Dermavant, Arcutis, Novartis, Novan, UCB, Helsinn, Sun Pharma, Almirall, Galderma, Leo Pharma, Mylan, Celgene, Valeant, Menlo, Merck & Co, Qurient Forte, Arena, Biocon, Accordant, Argenx, Sanofi, Regeneron, the National Biological Corporation, Caremark, Advance Medical, Suncare Research, Informa, UpToDate and the National Psoriasis Foundation. He is also the founder and majority owner of www.DrScore.com [drscore.com] and founder and part owner of Causa Research. Pichardo has worked at the advisory board for Novartis. Singh, Kelly, Paris, and Senthilnathan have no conflicts of interest to disclose.

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