Evaluating HODS: A New Validated Potential Instrument to Assess Odor and Drainage in HS - A Cross-Sectional Study

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Dear Editor,

Hidradenitis Suppurativa (HS) is a debilitating skin condition which forms draining tunnels and abscess. Hidradenitis odor and drainage scale (HODS) is a novel instrument developed to study drainage and odor in Hidradenitis Suppurativa (HS), as well as the effects of these symptoms on patient’s well-being. Draining tunnels are an important marker of disease activity in HS and both odor and drainage have significant impact on patient’s quality of life. However, there are no validated tools for measuring specifically drainage and odor in patients with HS. The current study is designed to evaluate the usage of HODS as an instrument to measure odor and drainage in HS patients.

This is a single center, cross-sectional, observational study performed on adults with HS. Following approval from the Penn State IRB (#00012496), demographic information, disease severity, Hidradenitis Suppurativa Quality of Life (HiSQOL), Dermatology Quality of Life Index (DLQI), and HODS were concurrently collected between 2018-2021 to demonstrate convergence of the new outcome measure with previously established measures. Patients are asked to rate “usual” odor/drainage and “worst” odor/drainage, during the last week on a scale of 1-5, with 5 being the worst. The “usual” section, abbreviated UHODS, asks the patient to rate their usual amount of drainage for each anatomic area. The “worst” section, abbreviated WHODS, asks the patient to rate their worst drainage. Statistical analysis was performed in SPSS. The relationship between the HODS scores and the other continuous variables were examined using scatter plots and the Kendall Tau correlation method as some data distributions were skewed. The relationship between the HODS scores and categorical variables were analyzed using boxplots. Further, known groups validity between total DLQI score bands and HODS scores was evaluated using ANOVA. Scale reliability was confirmed using Cronbach’s alpha coefficients.

Data was collected from a total of 94 patients, and 92 patients with complete data were considered. There was a strong linear correlation between HODS score and the other patient reported measures (HODS vs total DLQI scores, HiSQOL, and HiSQOL symptom subscore, R=0.74,0.76,0.84 respectively, Fig. 1). HODS displayed known-groups validity with higher scores in higher total DLQI score bands (ANOVA, P <0.001). Internal reliability was supported by Cronbach’s Alpha of 0.92.

In this study, the correlation between HODS and other important measures of HS severity, including DLQI and HiSQOL, was assessed. The results indicate that HODS is an effective clinical instrument for the measurement of odor and drainage in HS. Specifically, HODS displayed known groups validity with established DLQI score bands and demonstrated internal consistency based on Cronbach’s alpha, implying that it was consistent with other scales and itself. Limitations of this study include cross-sectional data and lack of comparison before and after treatment, as well as single center design. In this study of more than 90 patients, the usage of HODS as a measurement instrument for HS was evaluated. HODS had good agreement with the established patient-reported outcome scales for quality of life. HODS may prove valuable in both practice and research when odor/drainage are of importance.
References


Figure legend

Figure 1. HODS Score vs DLQI Score Band Boxplot. HODS, Hidradenitis odor and drainage scale; DLQI, Dermatology Quality of Life Index.