the odds of decreased pain scores (odds ratio, 1.03; 95% CI, 0.1–1.9; \( P = 0.023 \)) and no changes in pruritus scores. Lasers significantly reduced the odds of scar recurrence (odds ratio, 0.12; 95% CI, 0.04–0.41; \( P = 0.001 \)). Burn scars were more commonly located on the face/head (15% versus 7.5%; \( P < 0.001 \)), upper arm/forearm (40.5% versus 12.3%; \( P < 0.001 \)), posterior torso (6.5% versus 1.9%; \( P = 0.005 \)), and thigh/leg (15% versus 1.9%; \( P < 0.001 \)) compared to nonburn scars. Nonburn scars were more commonly located at the hands compared to burn scars (14.1% versus 7%; \( P = 0.007 \)). Burn scars were more commonly treated with lasers compared to nonburn scars (98.8% versus 19.9%; \( P < 0.001 \)). Nonburn scars were more commonly treated with surgery (18.8% versus 10.2%; \( P = 0.03 \)) and corticosteroid injections (75.5% versus 0.8%; \( P < 0.001 \)) compared to burn scars. Different laser handpiece options were significantly associated with successful responses to therapy (DeepFX = 100%, SCAAR FX = 65.8%, and ActiveFX = 48%; \( P = 0.014 \)).

CONCLUSIONS: Lasers increased the odds of decreased pain scores and no changes in pruritus scores for all etiologies of hypertrophic scars. Laser use reduced the odds of scar recurrence for all etiologies of hypertrophic scars. Hypertrophic burn scars were more commonly located on the face/head, upper arm/forearm, posterior torso, and thigh/leg, whereas hypertrophic nonburn scars were more commonly located on the hands. Hypertrophic burn scars had the greatest response rates with the laser handpiece DeepFX.

Prevalence of Autoimmune Disease in Patients With Hidradenitis Suppurativa Seen in Ambulatory Settings From 2008 to 2017

**Presenter:** Pragna N. Shetty, MPH

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**PURPOSE:** Hidradenitis suppurativa (HS) is estimated to affect almost 4.1% of the U.S. population and has been thought to be the result of a progressive, inflammatory disease of the apocrine glands. Recent case studies have shown a possible link between HS and autoimmune diseases, including systemic lupus erythematosus (SLE), Type 1 diabetes mellitus (T1DM), autoimmune thyroiditis, and inflammatory bowel disease (IBD), as well as a link to diseases that contribute to or are associated with autoimmune diseases, such as metabolic syndrome and polycystic ovarian syndrome (PCOS). In this study, we examined the associations between HS and these conditions.

**METHODS:** We used the Healthcare Cost and Utilization Project’s (HCUP) State Ambulatory Surgery and Services databases (SASD) for Florida, Maryland, and New Jersey from 2008 to 2017. We identified all adult patients who had been diagnosed with HS using ICD9 705.83 and ICD10 L73.2. Patients with HS were randomly matched to patients who were not diagnosed with HS at a ratio of 1 case:5 controls. A literature review was conducted to identify cases of autoimmune and autoimmune-related diseases that occur with HS.

**RESULTS:** Our cohort included 83,904 patients, 13,984 of whom were diagnosed with HS. Median age was 54 (36–67) with 48,175 (57.4%) females and 35,729 (42.6%). Increasing age was associated with a decreased risk for HS (odds ratio [OR], 0.96; \( P < 0.001 \)). Females were 1.7 times more likely to have HS than males (\( P < 0.001 \)). Black patients were 4.9 times as likely to have HS compared to their white counterparts (\( P < 0.001 \)), and Hispanic patients were 2.0 times more likely to have HS compared to their non-Hispanic counterparts (\( P < 0.001 \)). After adjusting for age, sex, and race/ethnicity, SLE was not significantly associated with an increased risk of HS (OR, 1.2; \( P = 0.43 \)). T1DM was also not significantly associated with HS (OR, 0.76; \( P = 0.17 \)). Autoimmune thyroiditis was associated with a decreased risk of HS (OR, 0.51; \( P = 0.03 \)). Patients with metabolic syndrome were found to be 2.4 times as likely to have HS compared to their non-Hispanic counterparts (\( P < 0.001 \)). After adjusting for age, sex, and race/ethnicity, SLE was not significantly associated with an increased risk of HS (OR, 1.2; \( P = 0.43 \)). T1DM was also not significantly associated with HS (OR, 0.76; \( P = 0.17 \)). Autoimmune thyroiditis was associated with a decreased risk of HS (OR, 0.51; \( P = 0.03 \)). Patients with metabolic syndrome were found to be 2.4 times as likely to have HS (\( P = 0.02 \)). Patients with PCOS were 4.26 times as likely to have HS and 1.9 times as likely to have IBD (\( P < 0.001 \)).

**CONCLUSIONS:** HS has previously been thought to be an inflammatory disease of the apocrine sweat glands. However, recent cases in the literature may indicate an autoimmune component to the disease. In this study of autoimmune diseases that have been linked to HS, we found that patients with HS were associated with significantly higher likelihood of IBD, metabolic syndrome, and PCOS than patients without HS. However, there was no significant increase in likelihood of HS in patients with SLE or T1DM, and autoimmune thyroiditis was associated with a decreased likelihood of HS. This suggests there may be an autoimmune
The Ideal Microsurgery Fellowship: A Survey of Fellows and Fellowship Directors

Presenter: Meera Reghunathan, MD
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PURPOSE: Microsurgery fellowship has existed since the 1980s, and there is yet to be an established curriculum. Microsurgery fellowships vary greatly in clinical caseload, case diversity, and training resources, and prior to this study, there was no consensus on the appropriate composition of a microsurgery fellowship. Further, there are not great transparent mechanisms to identify the variable experiences between different fellowships. This study surveys microsurgery fellows (MF) and fellowship directors (FD) to identify the characteristics of an ideal microsurgery fellowship.

MATERIALS AND METHODS: A 15-item questionnaire was sent to 38 fellowship directors and 90 recent microsurgery fellowship graduates. This questionnaire addressed program attributes, case volumes and compositions, ideal experiences, and time allocation to different fellowship experiences. Data were analyzed using descriptive statistics, t tests, and chi-square tests.

RESULTS: The response rate for MF and FD was 49% and 47%, respectively. FD and MF identified 76–100 and 101–125, respectively, as the median number of free flaps needed to train a competent microsurgeon. Both MF and FD agree that exposure to microsurgical breast reconstruction \( (P = 0.94) \) is the most important characteristic of a microsurgery fellowship. FD valued lymphatic surgery and replantation cases as the next most important microsurgical experiences, whereas MF valued free fibula and anterolateral thigh flaps \( (P < 0.01) \). Both MF and FD agreed that clinic should be 1 day per week \( (P = 0.53) \). All FDs and most fellows (81.5%) agreed that microsurgery fellowship should not be solely composed of microsurgery cases, citing revisional surgery as the most valuable nonmicrosurgical cases \( (P = 0.679) \). FDs found “case diversity and complexity” and MF identified “autonomy and independence” most commonly as the strength of their respective fellowship programs. Both FDs and MFs agreed that the most common weakness of microsurgery fellowship programs is “lack of nonbreast cases/poor variety of cases.” MFs identified becoming “more competitive for an academic job” as the most important reason to pursue fellowship, whereas FD emphasized obtaining a “mastery of microsurgery.”

CONCLUSION: Opinions regarding microsurgery fellowship programs are variable but there appears to be consensus on select topics as well as some agreement between fellows and program directors. Breast microsurgery remains a common high-value training experience, but also potentially overly abundant. There currently is not clear information for applicants to understand the distinctive compositions of each program. Educational standardization of microsurgery fellowship may improve the development and diversity of clinical and technical microsurgical skills but has the potential to undermine educational diversity that allows for unique and personalized training experiences. Understanding the opinions of the microsurgery fellowship training experience allows programs to refine their structure as well for trainees to better identify the correct match for them. Better transparency by the programs should be offered to allow applicants to make informed choices.

Outcome Analysis of Free Flaps in Patients With Collagen Vascular Disorders: 10-year Single Institution Review

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BACKGROUND: Collagen vascular disorders (CVD) are inflammatory diseases that can affect the blood vessels and soft tissues. Patients with CVD are often immunosuppressed, prone to hyper-coagulation and overall represent a challenging patient cohort for free tissue transfer. In this report, we review our outcomes of free tissue transfer in patients with CVD.

METHODS: A retrospective review of patients with CVD who underwent free flap reconstructions from January 2010...