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392

Dietary factors differentiate vitiligo patients with stable or active diseaseM Daniel¹, K Cedercruz², SM Rangel¹, Y Ali¹, KM Daftary¹, E Dellacecca¹, L van Horn², S Green³, I Le Poole¹ and RV Kundu¹ ¹ *Dermatology, Northwestern University Feinberg School of Medicine, Chicago, Illinois, United States*, ² *Preventive Medicine, Northwestern University Feinberg School of Medicine, Chicago, Illinois, United States* and ³ *Internal Medicine, Rush University, Chicago, Illinois, United States*

Vitiligo is mediated by T cells targeting melanocyte antigens. Depigmentation in vitiligo-prone mice can be accelerated or delayed by oral antibiotics in vitiligo-prone, but not in healthy mice. We questioned whether lifestyle factors influence microbiome composition and the development of human vitiligo. Patients and controls matched for age, sex and skin type were consented before administering dietary and lifestyle questionnaires, collecting skin and stool samples and evaluating clinical parameters related to vitiligo. Five-20 individuals per group were included per parameter. Patient VASI, BSA and VitiQol were measured. The NHANES validated dietary questionnaire (DHQII) provided nutritional data that were analyzed using R. DNA isolated from skin and stool samples was subjected to 16S rRNA and shotgun sequencing. No significant differences between patient and control groups were found for skin care parameters, household composition, occupation or diet. However, significant reductions in the % *Parabacteroides* and a trend towards reduced *Bacteroides* were observed in patient stool. Correlation analysis revealed biologically and statistically significant differences in dietary composition between patients with active or stable disease. Notable differences include elevated carbohydrate, total fat and cholesterol consumption and caffeine intake among patients with stable disease. These patients also consumed more fruit. Importantly, stable disease was associated with 80% increased dietary intake of vitamin B2 and Ca²⁺, each associated with a healthy gut. Meanwhile a strong trend towards increased energy derived from dietary alcohol was found among patients with active disease. We tentatively propose that reduced stress combined with increased dietary calcium and riboflavin can support a healthy gut and disease stabilization in vitiligo.



393

An analysis of dermatology resident population's medical trainings and degreesB Cooper¹, K Pulsipher¹, C Presley² and R Dellavalle^{3,4} ¹ *Rocky Vista University College of Osteopathic Medicine, Parker, Colorado, United States*, ² *Division of Dermatology, Lehigh Valley Health Network, Allentown, Pennsylvania, United States*, ³ *Department of Epidemiology, Colorado School of Public Health, Aurora, Colorado, United States* and ⁴ *Dermatology Service, VA Eastern Colorado Health Care System, Aurora, Colorado, United States*

Thousands of medical students apply for residency each year in the United States (US). The majority have graduated medical school and received a degree from a US based allopathic program (US MD), a US based osteopathic program (US DO), or are international medical graduates (IMG MD). The underrepresentation of US DO and IMG MD residents, compared with US MD residents, within the field of dermatology has been well documented in the literature. Numerous calls to action have both highlighted this disparity and advocated for an increase in representation of US DO and IMG MD residents within dermatology. To assess recent trends, we provide a ten year analysis of medical training background data of dermatology residents, compared to total Graduate Medical Education (GME) residents. For the academic years of 2011-2021, the total number of GME and dermatology residents were recorded. The residents' background medical training was determined through analysis of the Accreditation Council for Graduate Medical Education (ACGME) Data Resource Book. Our results demonstrate that from 2011-2021, 90.41% of dermatology residents were US MD, 6.16% US DO, and 3.41% IMG MD compared to 63.16% US MD, 11.94% US DO, and 24.84% IMG MD GME residents overall. Improvements have been made from 2011-2021, as the representation of US DO and IMG MD residents in dermatology increased from 2.0% to 10.7% for US DO's and from 3.0% to 3.5% for IMG MD's. While the percentage of US DO and IMG MD residents within dermatology has been increasing, attention should be directed towards making the representation of these two groups in dermatology similar to what is seen in other specialties. Future studies and endeavors should attempt to increase the representation of US DO and IMG MD physicians within the field of dermatology.



394

Characteristics and reasons for litigations involving dermatitis: An exploratory analysisR Raiker¹, K Jenkins², H Pakhchanian³ and L Shen² ¹ *West Virginia University School of Medicine, Morgantown, West Virginia, United States*, ² *Boston University School of Medicine, Boston, Massachusetts, United States* and ³ *The George Washington University School of Medicine and Health Sciences, Washington, District of Columbia, United States*

Previous research has examined the causes and characteristics for litigation among patients who listed psoriasis and cutaneous malignancies as reasons for lawsuits. However, reasons for litigation among patients with any form of dermatitis have not been assessed. Therefore, the goal was to assess this by an exploratory analysis using Westlaw, one of the largest online legal databases. Search terms "dermatitis or eczema" were used. Cases with judges and settlements were manually reviewed and excluded if dermatitis was unrelated to the overall lawsuit. Demographics, prosecution reason, verdict, dermatitis type, and case payouts were examined. 98 out of 155 cases met the inclusion criteria, ranging from years 1983-2021. 59% of plaintiffs were female and most cases were in the West (30%). Juries returning plaintiff and defendant verdicts were 37% and 43% respectively with others being settlements. Dermatitis was the primary cause of litigation in 72% of cases and the most prevalent form involved was contact dermatitis (62%) with minimal atopic dermatitis cases (5%). The median and mean payout among cases was \$25,000 and \$224,781 respectively (range from \$325-\$5075000). Top reasons for litigation included toxic exposure (41%), medical malpractice (32%), and negligent business practices (16%). Subgroup analysis of toxic exposure cases revealed 42% were from an adverse reaction to a product, 30% from an occupational hazard, and 27% were from improper cosmetic services. Among medical malpractice cases: 81% were won by defendants, 7% of overall defendants were dermatologists, and only 4% mentioned adverse effects of topical steroids. The findings here demonstrate majority of plaintiff-won cases came from lawsuits where patients suffered contact dermatitis and sued businesses. Additionally, minimal cases involved atopic dermatitis, topical steroids side effects, or lawsuits against physicians. Further research is warranted.



395

Utilization of teledermatology services for dermatological diagnoses during the COVID-19 pandemicA He¹, TT Kim² and K Nguyen¹ ¹ *Dermatology, The University of Texas Southwestern Medical Center, Dallas, Texas, United States* and ² *Naveen Jindal School of Management, The University of Texas at Dallas, Richardson, Texas, United States*

Little is known about trends in teledermatology adoption and use for managing dermatologic patients, especially changes in use influenced by the COVID-19 pandemic. In this retrospective cohort study, we analyzed encounter data from the Healthjump dataset (containing electronic health record data from throughout the US) for visits from November 2019 to July 2021 with a primary dermatology-related diagnosis. There was a striking rise in tele-dermatology use with the onset of the pandemic in February 2020, peaking in April 2021 with 2,178 teledermatology encounters (32.8% of all encounters). Subsequently, teledermatology use waned. When compared to those with neoplastic skin diseases, patients with inflammatory skin diseases were more likely to be seen via teledermatology (OR 3.30, 95% CI 3.12-3.49). Certain demographic groups were less likely to receive care via teledermatology, such as men (compared with females, OR 0.76, 95% CI 0.74-0.78) and patients 65 and older (compared with those below 65, OR 0.59, 95% CI 0.57-0.62). Our work shows increased adoption of teledermatology at the onset of the COVID-19 pandemic with decreasing use over time. Future efforts are needed to ensure continued and expanded use of a valuable care modality to reach vulnerable populations.



396

Characterizing inpatient hospitalizations for hidradenitis suppurativa and assessing the impact of outpatient dermatology care on hospitalizationsJ Maghfour, V Liu, R Huggins and IH Hamzavi *Dermatology, Henry Ford Health System, Detroit, Michigan, United States*

Introduction: Hidradenitis suppurativa (HS) is associated with a significant disease burden. The use of high-cost settings care are common among HS patients. **Objective:** To explore factors that may influence hospital admissions and readmissions among HS patients. **Methods:** Using ICD-9/10 codes (705.83 and L73.2), we extracted the medical records of adult HS patients who visited the Henry Ford Health System (HFHS) ED between 2010 and 2020. **Results:** Of the 100 HS patients, 52 (52%) were admitted to an inpatient service. Hypertension (OR:2.55,95% CI:1.11-5.83, p value=0.027), diabetes mellitus (OR:2.42, 95% CI:1.05-5.61, p value =0.039), cellulitis (OR: 19.28, 95%CI:4.23-87.96 p<0.001), sepsis (OR:10.25, 95%CI:1.34-89.24, p value=0.025), and depression (OR:3.32, 95%CI:1.10-10.04, p value =0.002) were significant predictors of admission. Chronic kidney disease (OR:3.05, 95% CI:1.00-9.23,p value=0.049), congestive heart failure (OR:4.06, 95%CI:1.19-13.80, p value =0.025), coronary artery disease (OR:15.20, 95%CI:2.80-82.65, p value=0.002), chronic obstructive pulmonary disease (OR:8.94, 95%: 1.51-52.86, p value =0.003), cellulitis (OR:4.62, 95%CI:1.66-12.88, p=0.003), sepsis (OR:3.75, 95%CI:1.02-13.82,p value =0.047), and depression (OR:4.50, 95%CI:1.54-13.18, p value=0.006) were positively associated with readmission. Those who received outpatient dermatology care had a lower risk of being admitted (n=87, 28.7% vs n=13,100%, p <0.001) and readmitted (n=10, 11.5% vs n=5, 38.5%, p value =0.0108). **Discussion:** In this study, we demonstrate that certain comorbidities, that are common among HS patients, are significant determinants of admission to an inpatient service. Furthermore, the increase access to outpatient dermatology care significantly reduces the likelihood of HS patients being admitted and readmitted. **Conclusion:** The findings of this study illuminate the pivotal role of dermatologists in improving patients' health outcomes while minimizing the avoidable use of high-cost settings care.

