The impact of mental health comorbidities on patient satisfaction: A population study among U.S. adults with dermatitis

C Read1, S Rajadurai, T Li, A Qureshi and E Cho

Dermatology, University of Southern California, Los Angeles, California, United States and 2 Medicine, Imperial College London, London, London, United Kingdom

The association between mental health comorbidities and patient satisfaction is rarely studied in adults with dermatitis. Treatment non-compliance and negative perceptions of providers may be associated with low satisfaction. Patient satisfaction can be measured using patients’ perception of patient–provider communication. We sought to determine the association between patient mental health comorbidities and their perception of patient–provider communication quality among U.S. adult patients with dermatitis. We performed a cross-sectional study using the Medical Expenditure Panel Survey from 2004–2017. Among 24,386,994 (weighted) U.S. adult (18+ years) patients with dermatitis pooled during the 14-year period, 15,482,175 (63%), 6,852,026 (28%), and 2,052,794 (9%) had no-to-mild, moderate, or severe symptoms of psychological distress, respectively. Additionally, 17,373,888 (71%), 5,583,468 (15%), and 3,429,638 (14%) had no-to-mild moderate, or severe symptoms of depression, respectively. We adjusted for sociodemographic characteristics and comorbidities and used validated instruments, patient–provider communication composite score, K6, and PHQ2. Compared to patients with no-to-mild symptoms, patients with moderate or severe psychological distress symptoms reported lower satisfaction with providers (b = −0.021; p < 0.001) and b = −1.362; p < 0.001, respectively) and were 3.1 times and 6.9 times more likely to report low satisfaction [AOR: 3.03 (1.60-5.77); p < 0.001, respectively] and 3.1 times and 9.9 times more likely to report low satisfaction [AOR: 3.14 (1.84-5.37); p < 0.001 and AOR: 3.9 (2.4-6.5); p < 0.001, respectively]. In conclusion, dermatitis patients’ baseline mental health status may be associated with their satisfaction with the provider.

Risk of headache and migraine in patients with atopic dermatitis – A population based cohort study

BL Heile1, D Shin1, J Wan and J Gelland

Dermatologist, University of Pennsylvania, Philadelphia, Pennsylvania, United States

There are several known comorbidities of atopic dermatitis (AD) yet there is still little known about AD and some non-allergic disorders. Migraine is of interest as it has a similar genetic expression profile as AD and potential mechanisms of action including increased cytokines and mast cell activation. To assess the risk of headache/migraine among AD patients, we performed a population-based cohort study using a U.K.-based electronic medical record database (The Health Improvement Network). We identified a total of 1,034,514 AD patients, both adult (<18y) and children (<18y) that were matched on age, practice, and index date with 4,487,917 controls. We determined that both adults and children were at greater risk for headache (<18y HR: 1.19, 95% CI: 1.18-1.21; <18y HR: 1.10, 95% CI: 1.09-1.12) and specifically in females (both <18y HR: 1.51, 95% CI: 1.45-1.57) and children (both <18y HR: 1.06, 95% CI: 1.03-1.09). Cox regression adjusting for age, sex, Townsend score, hormone therapy, allergy and asthma for all, adding BMI, smoking, and drinking for adults. We further stratified by disease severity including mild, moderate, and severe. Severity was assessed through the established method of using proxy measures of treatment such that those using systemic therapies or phototherapy are defined as severe, those with 2 or more potent topical steroids or topical calcineurin inhibitor prescriptions within 1 year are moderate, and are considered to have mild disease by default. Although similar risks are seen overall in children when compared to adults, adults with disease severity show different trends. Among children, only mild AD increases risk of migraine (HR: 1.08, 95% CI: 1.05-1.10) and AD ensures headache protection (HR: 0.84, 95% CI: 0.74-0.95) where for adults, risk remains consistent. The excessive risk of migraines was 1 in 594 per year in patients with AD. The indication of increased risk of headache and migraine for both adults and children with AD and the unique presentation in children across severity calls for further research investigation.

Caffeinated or decaffeinated coffee consumption and risk of cancers: A meta-analysis

TN Nguyen, D Eng and M Kawasumi

Medicine/Dermatology, University of Washington, Seattle, Washington, United States

Cancer is the second leading cause of death globally. Coffee consumption has been reported to reduce the incidence of various types of cancers; however, previous studies showed variable results, and few studies have addressed the effect of caffeinated versus decaffeinated coffee on cancer incidence. We performed a meta-analysis to systematically assess what types of cancers are prevented by caffeinated or decaffeinated coffee. We used PubMed, Scopus, and Embase databases to comprehensively identify peer-reviewed prospective cohort studies that associate coffee consumption with risk of cancers. The Newcastle-Ottawa Scale was used to assess the quality of nonrandomized studies. Summary relative risk (RR) was calculated by using the DerSimonian and Laird random effects model. Data response was analyzed by using linear regression. A total of 65 studies for 10 major cancer types were used for our meta-analysis (bladder, breast, colorectal, endometrial, hepatocellular, lung, ovarian, pancreatic, prostate, and skin cancers). Caffeinated coffee consumption (>2 cups per day) significantly reduced the risk of hepatocellular, endometrial, and skin cancers by 46% (RR 0.54, 95% confidence interval (CI) 0.39-0.74; 39% (RR 0.61; 95 CI 0.44-0.84), and 17% (RR 0.83; 0.68-1.01), respectively, while decaffeinated coffee had a similar result in these three cancer types. Significant dose-response effects of caffeinated coffee were observed in hepatocellular, endometrial, and skin cancers with 9.9%, 7.4%, and 7.8% risk reductions per cup, respectively. Intriguingly, decaffeinated coffee (>2 cups per day) may reduce the risk of prostate cancer by 12% (RR 0.88; 0.78-1.01), while decaffeinated coffee had no association with risks of breast and prostate cancers. Our meta-analysis demonstrates that caffeinated coffee consumption decreases the risk of hepatocellular, endometrial, and skin cancers in a dose-dependent manner. Further investigations are needed to elucidate molecular mechanisms by which caffeine prevents different types of cancer.