14003

Association between pemphigus and rheumatoid arthritis: Systematic review and meta-analysis

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Background: Pemphigus is an autoimmune blistering disorder that is associated with painful blisters and mucous membranes. It is characterized by IgG autoantibodies against desmosomal adhesion molecules, resulting in intraepidermal blisters of the skin and mucosal surfaces. There have been several case reports demonstrating the co-existence of rheumatoid arthritis and pemphigus, but whether an association exists or not remains unclear.

Objective: To perform a systematic review and meta-analysis to assess the association between pemphigus and rheumatoid arthritis.

Methods: A systematic review and meta-analysis was performed according to PRISMA guidelines. Odds ratio (OR) with 95% confidence interval (CI) was used as the effect size.

Results: We identified 6 studies which were pooled for meta-analysis. We found no significant association between pemphigus and rheumatoid arthritis (OR 1.52, 95% CI 0.70 $-$3.34, $P = .29$), with heterogeneity ($I^2 = 67\%$).

Conclusions: We found no significant association between pemphigus and rheumatoid arthritis. Our results differ to prior suggests that pemphigus may belong in the same autoimmune disease cluster with rheumatoid arthritis. Our study suggests their underlying autoimmune mechanisms may differ between pemphigus and rheumatoid arthritis.

Commercial disclosure: None identified.

14004

Depression and anxiety in patients with psoriasis treated with brodalumab: Real-world patient-reported outcome study

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Background: An association between psoriasis and depression/anxiety is controversial.

Objective: To study the relationship between depression/anxiety and various aspects of psoriasis in a real-world setting.

Methods: In this study, 73 Japanese patients (60 men, 13 women) with psoriasis were recruited from 15 hospitals between November 1, 2017, and March 31, 2019, and were treated with brodalumab. Depression and anxiety were measured by Patient Health Questionnaire 8 (PHQ-8) and Generalized Anxiety Disorder 7 (GAD-7) respectively on day 1 and week 12. Various patient-reported outcome data, including Itch Numeric Rating Scale, Skin Pain Numeric Rating Scale, Sleep Problems Index II, Dermatology Life Quality Index (DLQI), EuroQol-5 dimensions-5 levels (EQ-5D-5L), and Treatment Satisfaction Questionnaire for Medication version 9 were collected on day 1 and week 12. In addition, data for age, body weight, disease duration, age of disease onset, body mass index, and amount of alcohol intake were obtained on day 1. The Certified Review Board of the Nippon Medical School Foundation approved this study.

Results: About 23% and 30% of the patients had symptoms of depression (PHQ-8 score $\geq$5) and anxiety (GAD-7 score $\geq$5), respectively. GAD-7 and PHQ-8 scores were significantly positively correlated with DLQI score, and significantly negatively correlated with EQ-5D-5L utility index on day 1; however, they showed no correlation with PASI score.

Conclusions: The greater the depression/anxiety tendency before treatment, the lower the health-related quality of life.

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Novel single-nucleotide polymorphisms associated with pemphigus vulgaris

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Background: Genetic basis of pemphigus vulgaris (PV) is not fully known. HLA class II genes are associated with susceptibility to PV in different ethnic populations. In this pilot study we looked at the association of HLA and non-HLA genes with susceptibility to PV as also its severity.

Methods: The study was conducted in eight patients of PV and eight healthy controls. Next-generation genotyping array with optimized multi-ethnic genome-wide content was used.

Results: Mean age of the patients was 42.6 $\pm$ 9.3 years compared with 33.4 $\pm$ 9.4 years among controls. The mean disease duration was 12.0 $\pm$ 15.1 years. Of 8 patients, 2 had severe disease and 6 had mild to moderate PV on the PDAI score. SNPs with 0% frequency in the control population were excluded for further analysis. HLA-DQA1 (OR 9), HLA-DPB2 (OR 9), HLA-DMB (OR 7), and HLA-DQB1 (OR 5.571) genes were found to be statistically significantly associated with PV (with P value of 1.5). In addition HLA-DOB was found to be significantly associated with severe PV (OR = 15).

Discussion: Single-nucleotide polymorphisms (SNPs) are the most common type of genetic variation among different ethnicities. There are few studies regarding the roles of SNPs in PV. We found HLA-DQA1, HLA-DPB2, HLA-DMB, and HLA-DQB1 to be significantly associated with PV. We found novel SNPs—rs12722039 and rs12722042 in HLA-DQA1 and rs6689 in HLA-DQB1—besides pseudogenes HLA-DPB2 and HLA-DMB to be significantly associated with PV. Severe PV was found to be associated with the HLA-DOB allele.

Commercial disclosure: None identified.

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The role of community service in ACGME-accredited dermatology residency training programs

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In working toward providing equitable dermatologic care, both the act of and a commitment to community service (CS) are instrumental in mitigating disparities. We assessed the participation of Dermatology residency training programs in CS and the viewpoints of program directors (PD) concerning the importance and benefits of CS within Dermatology training. We surveyed 142 PD and received 78 responses (52.3%). 82.1% of PD said involvement in CS is moderately to extremely important regarding resident selection, 15.3% responded slightly important and 2.6% responded not important at all. 80.8% of PD said CS is moderately to extremely important to their program, 17.9% responded slightly important and 1.3% said not important at all. 17 programs (21.8%) have a CS requirement and 61 (78.2%) don't. Of the 61 programs without a requirement, 52 (85.2%) have opportunities for CS and 9 (14.8%) don't. Of the 52 programs with opportunities, 22 (42.3%) have 50% or higher resident participation. Although 66 PD (84.6%) believe CS is important for dermatology training, 3 (3.9%) responded not important and 9 (11.5%) are undecided. In conclusion, most PD believe CS is important for resident training. Yet, few have program-specific requirements. CS is seen as a way for residents to stay connected to what drew them to medicine, increase access for underserved populations, and improve perceptions by physicians and patients about dermatology. However, lack of available time, resident interest, and resources are barriers. While response rate (52.3%) is a limitation, our study is the first to assess CS within dermatology training.

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