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A pooled 48-week analysis of brodalumab on a marker of inflammation in patients with psoriasis and potential indicators of early nonalcoholic fatty liver disease

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Background: Patients with psoriasis are at increased risk of NAFLD, and inflammation plays a role in both. As well, fatty liver grade correlates with C-reactive protein (CRP) levels. The anti−interleukin-17 receptor A antibody brodalumab is indicated for moderate/severe plaque psoriasis in adults who failed/lost response to other systemic therapies.

Objective: To assess changes in inflammatory marker CRP in patients with psoriasis and early NAFLD indicators receiving brodalumab.

Methods: Data were pooled from 2 identically designed, randomized, double-blind psoriasis trials. Adults received brodalumab 210 mg subcutaneous every 2 weeks, or ustekinumab 45 mg (body weight ≤100 kg) or 90 mg (>100 kg) subcutaneous at baseline, week 4, and then every 12 weeks for up to 48 weeks. At week 16, ustekinumab-treated patients with inadequate response could switch to brodalumab 210 mg every 2 weeks. CRP changes were analyzed in patients subgrouped by baseline fibrosis indicators (aspartate aminotransferase [AST]/alanine aminotransferase [ALT] ratio ≥1.4, AST >40 U/L, fibrosis-4 [FIB4] score >1.3).

Results: In AST/ALT ≥1.4 subgroup, CRP decreased significantly from baseline with ustekinumab/brodalumab (16.2 mg/L [n = 6]) versus ustekinumab (2.8 mg/L [n = 56]; $P = .013$) at week 48. CRP decrease from baseline was numerically greater with ustekinumab/brodalumab versus ustekinumab in the AST >40 (3.3 [n = 10] vs 0.1 mg/L [n = 41]) and FIB4 score >1.3 (2.3 [n = 18] vs 0.8 mg/L [n = 85]) subgroups.

Conclusions: This long-term post hoc observation of decreased CRP levels in an early NAFLD population receiving brodalumab suggests that brodalumab may have activity in reducing liver inflammation. Funding: Studies: Amgen/AstraZeneca; post hoc analyses: Ortho Dermatologics.

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18602

Recalcitrant dermal hypersensitivity reaction treated with dupilumab

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Dermal hypersensitivity reaction describes a perivascular infiltrate of lymphocytes with eosinophils. This histology finding does not correspond to any single clinical diagnosis and inconsistent usage of the term 'dermal hypersensitive reaction' has led to it becoming a catchall description that most commonly corresponds to the presentations seen with medication reactions, arthropod bites, or urticaria. A 60-year-old woman with insulin-dependent diabetes mellitus and chronic autoimmune thyroiditis has been followed for 12 years after initially presenting with erythematous papules and plaques on the lower back causing severe pruritus. The patient underwent multiple biopsies which showed urticaria, dermal hypersensitivity reaction, and chronic spongiotic dermatitis. Direct immunofluorescence was repeatedly negative. Patch testing was positive for a fragrance mix however strict avoidance of fragrance did not lead to improvement. Over time the patient's cutaneous disease became more widespread and she continued to experience chronic debilitating pruritus which was recalcitrant to courses of topical steroids, phototherapy, hydroxychloroquine, methotrexate, mycophenolate mofetil, dapsone, minocycline and nicotinamide, and gabapentin. Like many well documented cases of urticarial dermatitis our patient responded to courses of prednisone. Following extensive treatment failures, the patient was maintained on daily mycophenolate and prednisone 10 mg which kept her cutaneous lesions at bay, however she continued to suffer from severe pruritus. Since initiating treatment with dupilumab the patient's dermatitis and associated pruritus have improved significantly enabling discontinuation of both mycophenolate and prednisone. For patients with severe recalcitrant pruritus and findings of perivascular lymphocytic infiltrate dermatitis or urticarial dermatitis, dupilumab may be a novel treatment option.

Commercial disclosure: None identified.

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Ultrasound follow-up rates in patients undergoing surveillance after positive sentinel lymph node biopsy

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Background: The Multicenter Selective Lymphadenectomy Trial II (MSLT-II) demonstrated that complete lymph node dissection (CLND) following positive SLNB is not associated with improved melanoma-specific survival when compared with close clinical follow-up and ultrasound of the affected nodal basin.

Objective: To review compliance with ultrasound monitoring following positive sentinel lymph node biopsy (SLNB) in patients with melanoma.

Methods: A retrospective chart review from February 2016 to April 2019 identified 167 patients with positive SLNB who did not undergo immediate CLND. All patients were recommended to follow at our institution with the surveillance protocol outlined in MSLT-II (every 4 months for 2 years then every 6 months during years 3-5). The percentage of patients completing ultrasounds was recorded. Average time between ultrasounds was calculated. Compliance was defined as having routine ultrasounds within 150 days of previous ultrasound for the first 2 years and within 210 days thereafter.

Results: 8 patients (4.8%) were lost to follow-up. 101 patients (63.5%) were fully compliant with the surveillance ultrasound protocol, 53 patients (33.3%) were partially compliant, and 5 patients (3.1%) had no ultrasounds.

Conclusions: We found that 36.5% of patients were not having surveillance ultrasounds as recommended. Patients not receiving routine ultrasounds may not have similar survival rates compared with patients receiving immediate CLND. Our results highlight the fact that regular ultrasound surveillance requires collaboration between patients and providers to ensure proper follow-up.

Commercial disclosure: None identified.

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The influence of biologics on psoriasis comorbidities: A systematic review

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Background: Psoriasis is associated with multiple comorbidities. Although biologics are highly efficacious psoriasis treatments, their influence on psoriasis-related comorbidities is not well characterized.

Objective: To evaluate the efficacy of biologics on reducing psoriasis-related comorbidities.

Methods: A systematic review was conducted through PubMed, Ovid, Medline, and Embase using the search terms "psoriasis," "biologic," "conventional treatment," and "comorbidity." Studies that included human participants with psoriasis, used the term "biologics" or a biologic name, and mentioned any psoriatic comorbidities were included. Of 840 studies identified, 34 studies were selected after full-text review. Evidence was evaluated using Jadad scoring system, and the biologic's number needed to treat (NNT) was calculated using absolute risk reduction.

Results: Biologics reduced depressive symptoms (IR: 3.01, 95% CI 2.73-3.32; NNT range: 38-58) compared with phototherapy (IR: 5.85, 95% CI 4.29-7.97; *P* value unreported) and non-biologics (IR: 5.70, 95% CI 4.58-7.1; *P* value unreported). Although biologics had inconclusive effects on myocardial infarction risk, they did reduce coronary artery disease risk ($P < .01$; NNT range: 38-97). Compared with nonbiologics, biologics do not increase malignancy risk, although the risk of nonmelanoma skin cancers was elevated (aHR: 1.42, 95% CI 1.12-1.80; NNT range: 22-30). Biologics had inconsistent effects on infection risk, with 5 studies reporting an elevated infection risk, 5 studies reporting no change in infection risk, and 1 study reporting a lower infection risk (NNT range: 13-73).

Conclusions: Biologics improved depressive symptoms, coronary artery disease, and psoriatic arthritis. Biologics are not associated with overall malignancy risk. Effects on myocardial infarction and infection risk were inconclusive.

Commercial disclosure: None identified.