Demodex mites modulate sebocyte immune reaction

Despite rosacea being a common facial skin disorder affecting middle-aged adults, its aetiology is unknown and pathogenesis uncertain. Activation of the host innate immune response has been identified as important. The Demodex mite population in the skin of these patients is significantly higher than in patients with healthy skin, suggesting that it may be of aetiologic importance in this disorder. These authors from Ireland and Germany set out to determine the role of these mites in human skin and their potential to interact with the host immune system. Live Demodex mites were extracted from healthy facial skin of control patients and used in cell stimulation experiments with the immortalized SZ95 sebocyte line. Time- and mite-dose-dependent experiments were performed. Direct effects of Demodex and effects of the medium in which Demodex had been cultured were evaluated in the Toll-like receptor (TLR) signalling pathway on both a gene and protein expression level. The authors concluded that Demodex mites have the capacity to modulate the TLR signalling pathway of an immortalized human sebocyte line. Furthermore, they showed that mites have the capacity to secrete bioactive molecules that affect the immune reactivity of sebocytes. Finally, they also demonstrated that increasing mite numbers influenced interleukin-8 secretion by these cells.

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Brodalumab outcomes and prior biological therapies

Papp and colleagues explain that biologics are increasingly used to treat moderate-to-severe psoriasis. However, efficacy may differ in patients with previous exposure to biologics. The aim of this study was to investigate the impact of previous biologic exposure on the efficacy and safety of brodalumab and ustekinumab in patients with moderate-to-severe plaque psoriasis. They studied two placebo- and ustekinumab-controlled phase III clinical trials. There was an initial 12-week induction phase where patients were treated with brodalumab (210 mg or 140 mg every 2 weeks), ustekinumab or placebo. In total, 493 patients [334 (27%) brodalumab 210 mg every 2 weeks and 159 (26%) ustekinumab] had received prior biologics; 150 (12%) and 62 (10%), respectively, reported previously failed treatment with a biologic. The efficacy of brodalumab in patients with or without previous exposure to biologics was statistically equivalent: 40.9% and 39.5% of biologic-naive and -experienced patients achieved 100% improvement in Psoriasis Area and Severity Index (PASI 100) at week 12, compared with 21.1% and 17.3% with ustekinumab (both P < 0.001). In patients where prior biologics had been successful or failed, 41.7% and 32.0% achieved PASI 100 with brodalumab, compared with 21.1% and 11.3% with ustekinumab. Tolerability was similar and did not appear to be influenced by previous treatment with biologics. The authors concluded that the efficacy of brodalumab 210 mg every 2 weeks was similar regardless of prior biological therapy (P = 0.31, 0.32 and 0.64 for PASI 75, 90 and 100, respectively). Almost twice as many patients achieved PASI 100 or complete clearance with brodalumab at week 12 compared with those receiving ustekinumab; the differences were most noticeable where previous biologics had failed. Both treatments were well tolerated.

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Aspirin, folic acid and risk of basal cell carcinoma

The North American and Canadian authors of this study open by stating that aspirin may reduce the risk of several types of cancer. Their aim was to evaluate whether folic acid is associated with risk of basal cell carcinoma (BCC). BCC incidence was evaluated in a randomized, double-blind, placebo-controlled clinical trial of aspirin (81 mg daily or 325 mg daily for about 3 years) and/or folic acid (1 mg daily for about 6 years) for the prevention of colorectal adenomas among 1121 participants with a previous adenoma. BCC was confirmed by blinded review of pathology reports. In total 104 of 958 non-Hispanic white participants were diagnosed with BCC over a median follow-up of 13.5 years. Neither aspirin nor folic acid treatment had a statistically significant effect on the risk of BCC. Subgroup analysis suggested that chemopreventive effects of nonsteroidal anti-inflammatory drugs may be specific to those at high risk for BCC.

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Epidemiology of rosacea

These Danish authors explain that the prevalence and incidence of rosacea are unknown, despite it being a common condition associated with severe noncutaneous diseases. Their aim was to perform a systematic review of the published literature to examine the global incidence and prevalence of rosacea. They carried out a systematic review of population-based and dermatological outpatient studies reporting the incidence and/or prevalence of rosacea using three electronic medical databases: PubMed, Embase and Web of Science. Data were extracted and a proportion meta-analysis was performed to obtain pooled proportions. In total 32 studies were included examining a total of 41 populations from Europe, three from Africa, four from Asia, nine from North America and three from South America. The authors estimated the global prevalence of rosacea based on published data as 5.46% of the adult population. However, the prevalence of rosacea depended on the diagnostic method, with higher estimates in questionnaire studies of rosacea symptoms and lower estimates in health registries with International Classification of Diseases codes.

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