

Transforming growth factor- β /Smad3 signalling regulates inflammatory responses in a murine model of contact hypersensitivity

Transforming growth factor (TGF)- β is an important modulator of immune functions and cellular responses, such as differentiation, proliferation, migration and apoptosis. The Smad proteins, which are intracellular TGF- β signal transducers, and mediate most actions of TGF- β , were studied in a murine model of contact hypersensitivity. The expression of proinflammatory [interleukin (IL)-1 β , tumour necrosis factor- α , IL-6], Th2 (IL-4) and Th17 type cytokines (IL-17), as well as regulatory components (TGF- β , Foxp3), increased significantly at the mRNA level in the skin of oxazolone-treated Smad3 $^{-/-}$ mice when compared with wild-type controls. The expression of Th1 type cytokine interferon- γ and chemokines CXCL9 and CXCL10 was, however, unaffected by the lack of Smad3. Also Th2 type chemokines CCL24, CCL3 and CXCL5 were increased in the skin of Smad3 $^{-/-}$ mice compared with wild-type mice. *Br J Dermatol* 2008; 159:546–54.

Loss-of-function polymorphisms in the filaggrin gene are associated with an increased susceptibility to chronic irritant contact dermatitis: a case-control study

Polymorphisms in the *FLG* gene were studied to determine whether they contributed towards susceptibility to chronic irritant contact dermatitis (CICD). In a case-control study, the *FLG* polymorphisms R501X and 2282del4 were determined in 296 patients with CICD; 217 apprentices in vocational training for high-risk occupations for CICD were chosen as controls. Heterozygotes for R501X and 2282del4, *FLG* null alleles, were more frequent among patients with CICD (12.5%) compared with controls (6.9%), resulting in an odds ratio of 1.91 (95% confidence interval 1.02–3.59). This showed that *FLG* null alleles are associated with increased susceptibility to CICD; whether the *FLG* null allele is an independent risk factor needs further study. *Br J Dermatol* 2008; 159:621–7.

Treatment of rosacea with intense pulsed light: significant improvement and long-lasting results

Intense pulsed light (IPL) was used to treat stage I rosacea (flushing, erythema and telangiectasia). The treatment employed was IPL 515–1200 nm, with a 560 nm cut-off filter. The fluence range was 24–32 J cm $^{-2}$. Four treatments were administered on the face at 3-week intervals. Thirty-four patients were treated, 25 women and nine men, mean

age 47 years. After four treatments the mean reduction of the erythema index was 39% on the cheeks ($P < 0.001$) and 22% on the chin ($P < 0.001$). This was confirmed by photographic assessment where erythema improved by 46% and telangiectasia by 55% ($P < 0.001$). The severity of rosacea was reduced on average by 3.5 points on a 10-point visual analogue scale. Patients' and physicians' assessments of the overall improvement of rosacea were similar: more than 50% improvement was noticed in 73% and 83% of patients, respectively ($P < 0.001$). These results were sustained at 6 months. Side-effects were minimal and self-limiting. *Br J Dermatol* 2008; 159:628–32.

Polymorphic light eruption and skin cancer prevalence: is one protective against the other?

Because there is increased immune surveillance and resistance to immune suppression following exposure to ultraviolet radiation in polymorphic light eruption (PLE) one might expect a protective effect of PLE against skin cancer (SC) and, conversely, a reduced risk of PLE among patients with SC. A prospective case-control study was undertaken comprising 214 patients with SC with 210 sex- and aged-matched controls and 100 patients with PLE and 155 sex- and aged-matched controls. Each participant answered a questionnaire aimed at establishing personal and family history of SC and photodermatoses. The prevalence of PLE in people with SC was 7.5%, compared with 21.4% for controls ($P < 0.001$). The prevalence of SC in patients with PLE was 4%, compared with 7.1% for controls. The immunological basis of PLE may therefore confer protection against SC. *Br J Dermatol* 2008; 159:697–702.

Is there a relationship between homocysteine and vitiligo? A pilot study

The aim of this study was to determine the level of homocysteine (Hcy) in the blood of patients with vitiligo as a first step in revealing if it had any relation to the pathogenesis of vitiligo and consequently if this would have an impact on its management. Twenty-six patients of both sexes with vitiligo (mean \pm SD age 31.4 \pm 8.1 years) and 26 age-matched healthy controls were included in this study. After excluding factors that may affect serum Hcy level, blood samples from patients and controls were obtained for Hcy determination by enzyme immunoassay. The mean serum level of Hcy was significantly higher in patients with vitiligo than in controls ($P < 0.001$). The Hcy level was significantly higher in male than in female patients ($P < 0.001$) and in male than in female controls ($P < 0.001$). Hcy level was related to the activity of vitiligo. The authors concluded that elevated Hcy level may be a factor precipitating vitiligo in predisposed individuals. *Br J Dermatol* 2008; 159:726–30.