

### Ac-SDKP ameliorates the pro-inflammatory response of proximal tubular epithelial cell induced by TGF-beta and pathogenic albumin loading

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**Introduction:** The endogenous tetra-peptide, N-acetyl-seryl-aspartyl-lysyl-proline (Ac-SDKP), is known to inhibit TGF-beta signal transduction in glomerular mesangial cells. This study investigated the potential for Ac-SDKP to exert similar beneficial effects on the renal proximal tubular epithelial cell (PTEC), the key cell type that orchestrates tubulointerstitial inflammation, in response to TGF-beta and pathogenic albumin loading.

**Methods:** PTEC incubated in serum-free medium, with or without Ac-SDKP (1, 10 or 100 nM), were challenged with human serum albumin (HSA) or TGF-beta at 5 mg/mL and 2.5 ng/mL respectively. Western blotting was performed to determine the effects on intracellular signalling whilst qPCR and ELISA were performed to determine the level of cellular gene and protein expressions respectively.

**Results:** HSA-induced ERK signalling in human primary PTEC was inhibited by Ac-SDKP in a dose-dependent fashion. Furthermore, HSA and TGF-beta induced IL-6 and MCP-1 mRNA expressions were attenuated by Ac-SDKP treatment at 100 nM. While HSA and TGF-beta significantly induced IL-6 secretion by 5- and 3-fold respectively, Ac-SDKP almost completely abrogated these responses.

**Conclusion:** We conclude that Ac-SDKP reduces the pro-inflammatory response of PTEC in response to TGF-beta and albumin challenge.

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### Dermatitis flammeus — an emerging infection-related complication of atopic dermatitis

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**Objective:** To investigate the clinical, microbiological, immunological and pathological features of a proposed novel complication of atopic dermatitis (AD) related to infection.

**Design:** Case series and retrospective analysis.

**Setting:** A tertiary university hospital and a private specialist dermatology clinic in Hong Kong.

**Patients:** Twenty patients were included between January 2008 and September 2010.

**Main outcome measures:** Clinical characteristics, microbiological findings, therapeutic strategy and prognosis of the proposed condition.

**Results:** Patients' ages ranged from 17 months to 52 years (mean, 23 years). The male-to-female ratio was 1:1. AD was the single major predisposing factor. Skin lesions followed an identical triphasic progression in all cases. A symmetric and predominant flexural involvement was observed. *Pseudomonas aeruginosa* and *Staphylococcus epidermidis* were most frequently cultured from superficial skin swabs. Second-generation cephalosporins or anti-pseudomonal antibiotics were the preferred first-line antimicrobial regimen. Intravenous immunoglobulins were used with significant improvement in refractory cases. Complete resolution was evident in all 20 cases and recurrence was common (35%).

**Conclusions:** A unique clinical pattern was observed in our series. No conclusive data were identified from the microbiological and histopathological findings. Further microbiological and molecular studies are required to identify the role of culprit micro-organisms in its pathogenesis.