Inflammatory monocyte-derived dendritic cells mediate autoimmunity in murine model of systemic lupus erythematosus

T Miyagawa, J. S. Hsu, S. Tanaka, Y. Nagami, C. H. M. de Pont, M. Yoshida, F. Miyagawa and H. Asada
Shanghai Skin Disease Hospital, Shanghai, China and 2 Institute of Perry of Tongji University, Shanghai, China

Generalized purpuric psoriasis (GPP) is a severe and rare variant of psoriasis, which presents skin lesions that can cover large body surfaces. Treatment of GPP is challenging due to systemic symptoms. Besides the cutaneous manifestations, the severity of GPP has also been evaluated using blood tests, such as neutrophil count and C-reactive protein (CRP) levels. Serum amyloid A (SAA) is one of the most prominent positive acute-phase proteins, which is highly elevated in serum due to systemic inflammation. Here, we measured the levels of circulating SAA in patients with GPP and psoriasis vulgaris (PV) as well as healthy controls, and assessed its correlations with inflammatory markers like blood neutrophil count and CRP levels. Serum SAA levels were evaluated by ELISA (Human Serum Amyloid A 1.100 ELISA, R&D systems, Minneapolis, MN, USA). The serum CRP levels were measured by latex immunoelectrophoresis (CRP (late) High-Sensitivity, Roche Pharma & Diagnostics, Shanghai, China). The mean levels of serum SAA in GPP and PV patients were significantly higher than healthy control subjects (T45.63 ± 146.28 pg/mL, 191.14 ± 208.51 ng/mL vs. 36.8 ± 95.12 ng/mL, while the difference between GPP and PV groups was also significant. As for the correlation between SAA levels and markers for disease severity in patients with GPP, we observed that serum SAA presented a positive correlation with neutrophil count (r = 0.40, P < 0.026) and CRP levels (r = 0.40, P = 0.04). In summary, we described the elevation of circulating SAA levels in patients with GPP, and serum SAA levels might reflect the clinical severity of GPP, though the findings of this study should be confirmed in a prospective study of a larger number of patients.

Circulating serum amyloid A levels correlate with the severity of generalized purpuric psoriasis

T. Watanabe, Y. Yamauchi, Y. Watanabe, N. Takamura and M. Aihara Dermatology, Yokohama City University Medical School, Japan

High-mobility group box-1 (HMGB-1) is a highly abundant pro-inflammatory protein which is associated with the pathogenesis of inflammatory and autoimmune diseases, such as drug eruption, sepsis, and rheumatoid arthritis. HMGB-1 has a dual function: inside the cells, it plays a role in transcriptional regulation. While outside the cells, it plays an alarmin or damage-associated molecular pattern. It has been reported that HMGB-1 expression levels of the serum and skin were increased in patients with psoriasis vulgaris (PV). However, HMGB-1 expression in patient with generalized purpuric psoriasis (GPP) was unknown. In this study, we investigated the HMGB-1 levels in the serum and skin in patient. To analyze the expression levels of HMGB-1, we performed ELISA and immunohistochemistry in the lesional skin samples from patients with GPP and healthy controls (HC). Immunohistochemistry analysis revealed that HMGB-1 expression levels in epidermis were significantly increased in patients with GPP compared to that in patients with PV, AD and HC. Furthermore, serum levels of HMGB-1 were significantly decreased after the systemic treatment compared to baseline levels. In the correlation analysis, a high positive correlation was detected between serum HMGB-1 levels and Japanese severity criteria for GPP in patients with GPP. In conclusion, our findings show that HMGB-1 might be involved in the pathogenesis of GPP and is a simple and attractive marker for the analysis of disease severity and the effectiveness of treatment in patients with GPP.

Transcriptome analysis suggests a role of IL-17-related genes in pemphigus

H. Hoshida, F. Solomairi, K. Mesey, T. Tekahi and K. Ghoreschi
Department of Dermatology, University Medical Center Tübingen, Tübingen, Germany; 2 Department of Dermatology, Venereology and Allergology, Charité – Universitätsmedizin Berlin, Berlin, Germany; and 3 Institute of Medical Informatics, University of Munster, Munster, Germany

Generalized pustular psoriasis (GPP) is a severe and rare variant of psoriasis, which presents skin lesions that can cover large body surfaces. Treatment of GPP is challenging due to systemic symptoms. Besides the cutaneous manifestations, the severity of GPP has also been evaluated using blood tests, such as neutrophil count and C-reactive protein (CRP) levels. Serum amyloid A (SAA) is one of the most prominent positive acute-phase proteins, which is highly elevated in serum due to systemic inflammation. Here, we measured the levels of circulating SAA in patients with GPP and psoriasis vulgaris (PV) as well as healthy controls, and assessed its correlations with inflammatory markers like blood neutrophil count and CRP levels. Serum SAA levels were evaluated by ELISA (Human Serum Amyloid A 1.100 ELISA, R&D systems, Minneapolis, MN, USA). The serum CRP levels were measured by latex immunoelectrophoresis (CRP (late) High-Sensitivity, Roche Pharma & Diagnostics, Shanghai, China). The mean levels of serum SAA in GPP and PV patients were significantly higher than healthy control subjects (T45.63 ± 146.28 pg/mL, 191.14 ± 208.51 ng/mL vs. 36.8 ± 95.12 ng/mL, while the difference between GPP and PV groups was also significant. As for the correlation between SAA levels and markers for disease severity in patients with GPP, we observed that serum SAA presented a positive correlation with neutrophil count (r = 0.40, P < 0.026) and CRP levels (r = 0.40, P = 0.04). In summary, we described the elevation of circulating SAA levels in patients with GPP, and serum SAA levels might reflect the clinical severity of GPP, though the findings of this study should be confirmed in a prospective study of a larger number of patients.

Increased levels of high mobility group box-1 in the serum and skin in patients with generalized purpuric psoriasis

T. Watanabe, Y. Yamauchi, Y. Watanabe, N. Takamura and M. Aihara Dermatology, Yokohama City University Medical School, Japan

Generalized purpuric psoriasis (GPP) is a severe and rare variant of psoriasis, which presents skin lesions that can cover large body surfaces. Treatment of GPP is challenging due to systemic symptoms. Besides the cutaneous manifestations, the severity of GPP has also been evaluated using blood tests, such as neutrophil count and C-reactive protein (CRP) levels. Serum amyloid A (SAA) is one of the most prominent positive acute-phase proteins, which is highly elevated in serum due to systemic inflammation. Here, we measured the levels of circulating SAA in patients with GPP and psoriasis vulgaris (PV) as well as healthy controls, and assessed its correlations with inflammatory markers like blood neutrophil count and CRP levels. Serum SAA levels were evaluated by ELISA (Human Serum Amyloid A 1.100 ELISA, R&D systems, Minneapolis, MN, USA). The serum CRP levels were measured by latex immunoelectrophoresis (CRP (late) High-Sensitivity, Roche Pharma & Diagnostics, Shanghai, China). The mean levels of serum SAA in GPP and PV patients were significantly higher than healthy control subjects (T45.63 ± 146.28 pg/mL, 191.14 ± 208.51 ng/mL vs. 36.8 ± 95.12 ng/mL, while the difference between GPP and PV groups was also significant. As for the correlation between SAA levels and markers for disease severity in patients with GPP, we observed that serum SAA presented a positive correlation with neutrophil count (r = 0.40, P < 0.026) and CRP levels (r = 0.40, P = 0.04). In summary, we described the elevation of circulating SAA levels in patients with GPP, and serum SAA levels might reflect the clinical severity of GPP, though the findings of this study should be confirmed in a prospective study of a larger number of patients.

Transcriptome analysis suggests a role of IL-17-related genes in pemphigus

H. Hoshida, F. Solomairi, K. Mesey, T. Tekahi and K. Ghoreschi
Department of Dermatology, University Medical Center Tübingen, Tübingen, Germany; 2 Department of Dermatology, Venereology and Allergology, Charité – Universitätsmedizin Berlin, Berlin, Germany; and 3 Institute of Medical Informatics, University of Munster, Munster, Germany

Transcriptome analysis suggests a role of IL-17-related genes in pemphigus

H. Hoshida, F. Solomairi, K. Mesey, T. Tekahi and K. Ghoreschi
Department of Dermatology, University Medical Center Tübingen, Tübingen, Germany; 2 Department of Dermatology, Venereology and Allergology, Charité – Universitätsmedizin Berlin, Berlin, Germany; and 3 Institute of Medical Informatics, University of Munster, Munster, Germany

Transcriptome analysis suggests a role of IL-17-related genes in pemphigus

H. Hoshida, F. Solomairi, K. Mesey, T. Tekahi and K. Ghoreschi
Department of Dermatology, University Medical Center Tübingen, Tübingen, Germany; 2 Department of Dermatology, Venereology and Allergology, Charité – Universitätsmedizin Berlin, Berlin, Germany; and 3 Institute of Medical Informatics, University of Munster, Munster, Germany

Transcriptome analysis suggests a role of IL-17-related genes in pemphigus

H. Hoshida, F. Solomairi, K. Mesey, T. Tekahi and K. Ghoreschi
Department of Dermatology, University Medical Center Tübingen, Tübingen, Germany; 2 Department of Dermatology, Venereology and Allergology, Charité – Universitätsmedizin Berlin, Berlin, Germany; and 3 Institute of Medical Informatics, University of Munster, Munster, Germany

Transcriptome analysis suggests a role of IL-17-related genes in pemphigus