types of GN, especially in an active injury phase. Of note is that MPO deposition, especially diffusely distributed MPO deposits along the glomerular capillary wall, was significantly related to glomerular capillary injury and necrotic changes not only in MPO-ANCA-associated GN but also in anti-GBM GN, lupus N, HSPN and IgA N. In contrast, the distribution of MPO was limited at only a small part of the glomerular capillary wall in PSAGN, although the MPO deposition and MPO-positive cells were widely seen in almost glomeruli. 

Conclusion.– These results indicate that MPO deposition caused by infiltrated MPO-positive cells may play important roles in the pathogenesis of glomerular capillary injury.

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P122 Comparison of phenotype and outcome in microscopic polyangiitis between Europe and Japan


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Introduction.– Both genetic and environmental factors contribute to the onset of microscopic polyangiitis (MPA). Europe and Japan have different ethnicities and different environments. Indeed, there are differences in the incidence and ANCA serotype of MPA patients between Europe and Japan. However, differences in phenotype or outcome have not been explored. We aimed to identify differences in phenotype and outcome of MPA between Europe and Japan.

Methods.– Sequential cohorts of MPA patients were collected from European and Japanese centres (n = 147 and n = 312 respectively). Trial databases from the European Vasculitis Society and the Japanese patients with MPO-ANCA-associated vasculititis (JMAAV) trial were studied (n = 254 and n = 48 respectively). We evaluated baseline characteristics including ANCA status and organ involvement, treatment, survival and renal survival. Differences in survival and renal survival were studied by multivariate analysis.

Results.– MPA patients in Japan had a higher age at onset, more frequent MPO-ANCA positivity, lower serum creatinine and more frequent interstitial pneumonitis than those in Europe (all P < 0.01). Comparisons between the trial databases demonstrated similar results. Cumulative patient survival and renal survival rates were not different between Europe and Japan (P = 0.71 and 0.38 respectively). Multivariate analysis identified age at onset, serum creatinine, respiratory involvement and azathioprine use as predictive factors for patient survival, and serum creatinine, use of any immunosuppressant and plasma exchange as factors for renal survival.

Conclusion.– Phenotypes in MPA patients were different between Europe and Japan. However, the outcomes of patient survival and renal survival were similar.

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P123 Prediction of outcome of treatment by gene expression profiling of peripheral blood in patients with microscopic polyangiitis

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Introduction.– The open-labeled prospective clinical trial, JMAAV study, proposed the severity-based treatment protocols for patients with microscopic polyangiitis (MPA) [1]. The results of JMAAV study suggest the proposed protocols are useful (remission rate: 89.4%) but are also indicative of relapse or patient demise regardless of the treatment (recurrence rate: 19.0%; mortality rate: 10.6%). The aim of this study is to discover the prognostic factors that can predict outcome of the treatment in patients with MPA.

Methods.– Transcriptome analysis was performed using peripheral blood from patients enrolled in JMAAV study before and 1-week after the beginning of treatment.

Results.– The gene expression profile before treatment was not directly related to the outcome of the treatment. However, when the samples from nine patients with good outcome (persistent remission) were examined, the expression of 88 genes was significantly altered by the treatment. Thirty statistically reliable genes were selected, and then the alteration of expression by the treatment was examined among 22 patients, including 17 with good outcome (persistent remission) and five with poor outcome (relapse after remission or no remission). Multiple regression analysis between the alteration of expression of the 30 genes by the treatment and the outcome identified a combination of 16 genes as the most valuable gene set for prediction of outcome of the treatment.

Discussion.– Prediction of the outcome of treatment at an early point during the therapy brings useful information for conducting the appropriate follow-up of the patients.

Conclusion.– This preliminary study identified IRF7, IFI11, IFI5, OAS, CCL, GBP-1, PSMB9, HERC5, CCR1, CD36, MS4A4A, BIRC4BP, PLSCR1, DEFA1/DEFA3, DEFA4, and COL9A2 as the prognostic factors that can predict outcome of the treatment in patients with MPA at an early point during the therapy.

Reference

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