HnRNP-A2/B1 as a target antigen of anti-endothelial cell IgA antibody in Behcet’s disease

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Objective. The aim of our study was to identify the anti-endothelial cell IgA antibody-binding HDMEC antigen. Methods. We detected a target protein by using Western blotting and immunoprecipitation, and then searched for a similar protein after the amino acids were sequenced by LS-EOI-MS-MS analysis. We purified the recombinant target protein by gene cloning. Then serum reactivities against the recombinant target protein were analyzed by immunoblotting. Also, serum cross-reactivities against streptococcal 65 kDa of a hsp-65 and recombinant human α-enolase were investigated by ELISA. Results. Western blotting of HDMEC’s extracts with selected serum samples of ten BD patients detected a 36-40 kD protein band in all patients, which showed the amino acid sequences of hnRNP-A2/B1. Reactivity of serum IgA against human recombinant hnRNP-A2/B1 was detected in 25 of 30 BD patients (83.3%) and six of 30 healthy controls (20%) on Western blots. Optical densities obtained from ELISAs against the recombinant human hnRNP-A2/B1 were correlated with those against the recombinant streptococcal hsp-65. Conclusion. We have identified an hnRNP-A2/B1 protein as a target protein of serum anti-endothelial cell IgA antibody in BD patients. We also demonstrated serum IgA cross-reactivity between the recombinant human hnRNP-A2/B1 and the recombinant streptococcal hsp-65.

Key Words : HnRNP-A2/B1, Behcet’s disease