

Letter to the Editor:

Comment on: A Case of Post-streptococcal Glomerulonephritis with Diffuse Alveolar Hemorrhage

Dear Editor,

We read with interest the article by Sung et al. (1) They reported a 59-yr-old woman who presented with diffuse alveolar hemorrhage (DAH) associated with acute post-streptococcal glomerulonephritis (PSGN). They wondered why the patient had developed such a rare and life-threatening condition in contrast to the typical course of PSGN.

Although the exact mechanism of DAH in PSGN is unclear, one experimental study by Fitzsimons and Lange (1) suggested that antibody against streptococcal cell membrane (SCM) antigens might play an important role in the pathogenesis of the association. In this study (1), tissue injury was induced in mice by the injection of monoclonal antibody (mAb) against SCM antigens, and a more severe onset of the pathology, also on a dose-dependent basis, was induced by placement of the anti-SCM mAb-secreting hybridoma cells into the peritoneal cavity. The severity of observed lesions, such as pulmonary hemorrhage, was dependent on the number of cells injected, and was greater in the female littermate than the male. Immunohistochemical study and enzyme-linked immunosorbent assay demonstrated the ability of these anti-SCM mAb to react with glomerular basement membrane (GBM) antigens as well as lung basement membrane (LBM).

Although not validated in a human model, this experiment might partly explain the possible relationship between PSGN and DAH, and therefore, DAH should also be considered as a possible cause of the serious complications when a patient, especially female, presents with PSGN as in this

case. Further studies are necessary to identify clinical or laboratory markers to predict the development of DAH in patients with PSGN.

REFERENCES

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2. Fitzsimons EJ, Lange CF. *Hybridomas to specific streptococcal antigen induce tissue pathology in vivo; autoimmune mechanisms for post-streptococcal sequelae. Autoimmunity* 1991; 10: 115-24.

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