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Lung alert

Immunoglobulin G2 subclass deficiency and H1N1

Severe H1N1 infection is associated with risk factors that include pregnancy, obesity and immunosuppression. This study assessed levels of serum immunoglobulin G (IgG) and IgG subclasses in patients with severe H1N1 infection (defined as infection requiring respiratory and/or vasopressor support) and moderate H1N1 infection (defined as those requiring hospitalisation) and in healthy pregnant women.

Thirty-nine patients (19 with severe infection and 20 with moderate infection) were assessed. The presence of severe H1N1 infection was significantly associated with low levels of total IgG, IgG1 and IgG2 compared with moderate infection, and similarly hypoalbuminaemia and anaemia, but only hypoalbuminaemia and low mean IgG2 levels remained statistically significant after multivariate analysis. Convalescent phase serum samples were obtained from 15 IgG2-deficient patients (11 with severe infection and 4 with moderate infection) at a mean of 90 ± 23 days. Eight (73%) patients with severe infection remained IgG2 deficient, but hypoalbuminaemia was resolved in most patients. Pregnant women with H1N1 infection had significantly lower mean levels of IgG2 compared with the pregnant control subjects.

Severe H1N1 infection is associated with IgG2 deficiency, which appears to persist, but it is uncertain whether those patients had underlying IgG2 deficiency, or whether interaction between H1N1 infection and the host B cells leads to such deficiency. Nevertheless, this may prove an interesting therapeutic avenue to pursue in the future.

► **Gordon CL**, Johnson PDR, Permezel M, *et al.* Association between severe pandemic 2009 influenza A (H1N1) virus infection and immunoglobulin G2 subclass deficiency. *Clin Infect Dis* 2010;**50**:673–8.

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