

## **IMMUNE STATUS OF MBL-DEFICIENT PATIENTS WITH LOWER RESPIRATORY TRACT INFECTIONS**

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A major part of adults with primary immunodeficiencies present with recurrent respiratory tract infections (RRTI). Measurement of complement activity (classical pathway, alternative pathway, mannose binding lectin (MBL)) is part of the diagnostic procedures for patients with RRTI. Deficiency of MBL, which plays a role in the lectin pathway of the complement system, is not considered to be an immunodeficiency per se. Yet, international guidelines recommend administration of pneumococcal vaccines to all patients with recurrent infections. Recent meta-analysis (Garcia-Laorden et al., 2013) indicates that MBL-deficiency may contribute to vulnerability for community acquired pneumonia. Whether patients with MBL-deficiency would benefit from pneumococcal vaccination will depend on their responsiveness.

In the St. Antonius Hospital, a cohort of 81 patients (18 MBL-deficient and 63 MBL-sufficient) with 3 or more RRTI per year were vaccinated with a 23-valent pneumococcal vaccine with measurement of IgG antibody titres to 14 pneumococcal serotypes before and 3-6 weeks after vaccination.

The antibody response of the MBL-deficient patients (83%) was equal to that of the MBL-sufficient patients (71%). Four MBL-sufficient patients with an inadequate response had an underlying immunodeficiency. The data therefore show that both groups of patients have an adequate response to pneumococcal vaccination. The only difference found was for the response to serotype 4, which was significantly higher in MBL-sufficient patients.

The advice to vaccinate is valuable for all patients with RRTI, including patients with MBL-deficiency.