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Titel: Can Conjugated Pneumococcal Vaccine Improve the Immune Response, Lead to Feber Infections Compared to Polysaccaride Vaccine in patients with CLL

Namn: Svensson Magnus

Sammanfattning

Pneumococcal vaccination (v) are recommended for some CLL-patients (CLL-P). Protection against infections depends on an adequate level of antibodies (Abs). During v, the immune system is stimulated and boosted levels of protective Abs are produced. A majority of CLL-P are immunodeficient with low Ab-levels and their immune cells may not work normally. The cause of the immune defects is not known, although T-cell and complement defects may contribute to the condition.

The weakened immune system of the CLL-P, could be related to the leukaemia, caused by the chemotherapy, or immunochemotherapy. CLL-P have a suboptimal response to v against influenza, pneumococcus and haemophilus. Most vaccines are unconjugated and thymus independent. Conjugation to a carrier protein renders vaccines thymus dependent and more immunogenic. A study showed that 21% of CLL-P had baseline immunity to haemophilus influenzae, but following v with a conjugated haemophilus influenzae type b vaccine, this rose to 54%.

In contrast, pneumococcal Ab baseline levels were similar between CLL-P and normal controls. The latter responded to v (with an unconjugated vaccine), whereas most CLL-P did not. Recent studies have shown that fewer than 10% of CLL-P will reach a protective antibody titer after vaccine with conventional 23-valent PnC vaccine. A new type of "protein conjugated" 7-valent pneumococcal vaccine has been shown to increase the immune response in CLL-P. The study aim to establish this.