

Prognosis of coronavirus disease in patients with immune-mediated inflammatory diseases treated with immunomodulating agents and biologics

SUMMARY

Biologics and other immunomodulating agents are effective treatments for a number of immune-mediated inflammatory diseases (including inflammatory bowel diseases, rheumatoid arthritis, psoriasis and hidradenitis suppurativa). These medications have a strong effect on the immune system decreasing inflammation, but this has prompted concerns regarding the body's defence against infection. This is particularly pertinent during the current epidemic of coronavirus (COVID-19), as a weakened immune system may be vulnerable to severe coronavirus disease.

We aim to evaluate the prognosis of COVID-19 in patients with immune-mediated inflammatory diseases treated with biologics and other immunomodulating medications. We will leverage unique Danish health registers to conduct a nationwide cohort study of outcome of COVID-19, i.e. admission to intensive care unit (intensive care observation/intensive care therapy), mechanical ventilation and/or death, in this patient population, with adjustment for the severity of patients' underlying immune mediated inflammatory disease, as well as other factors that may affect the course of coronavirus disease.

If possible, in terms of study power, we will estimate the relative safety of the individual treatments for inflammatory diseases, producing results relevant for clinical practice and patient safety during the epidemic.

STUDY GROUP

The present project is a collaboration between experienced researchers at Statens Serum Institut (Tine Jess [CV attached], Daniel Ward, Sanne Gørtz), Rigshospitalet, Capital Region (Nynne Nyboe-Andersen), the Danish Cancer Society (Susanne K Kjær), and University of Southern Denmark (Anton Pottegaard).

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