The effect of COVID-19 Vaccine in severe Post COVID Syndrome

Background: Millions of individuals suffer from long term persistent symptoms after COVID-19 infection (long COVID). Few studies indicate a possible effect of COVID-19 vaccination on long COVID, but the effect in patients with severe long COVID are not known.

Aim: We aim to examine the effect of COVID-19 vaccine on the trajectory of long COVID.

Method: At Aarhus University Hospital patients with severe long COVID are evaluated in a Post COVID-19 Clinic, and included in a Post COVID Cohort following informed consent. Clinical as well as paraclinical information are collected, including information on COVID-19 vaccinations, as well as patient reported symptoms and standardized health scales of functional level, fatigue and health related quality of life (PCFS, FAS, EQ VAS and EQ-5D-5L). The trajectory of long COVID will be measured using the difference in Post COVID Symptom (PCQ) score, as the primary outcome measure, during a 6-month follow-up period from inclusion in the cohort to the follow-up at 24 weeks later. Secondary outcomes will be the difference in each of the standardized health scale scores during 6 months follow-up.

Preliminary results: More than 700 patients were included in the Post COVID Cohort. 24% (177/727) of patients received a COVID-19 vaccine during follow-up. We expect to be able to present demographic and clinical characteristics of patients with and without a COVID-19 vaccine received during follow-up, and we will present the improvement of PCQ in patients who had a COVID-19 vaccine compared with patients not receiving a COVID-19 vaccine during follow-up.

Perspective: The results are expected to be of importance for examination and treatment of long COVID patients as well as for vaccine strategies.