**Introduction:**
The novel coronavirus SARS-CoV-2 and the resulting disease COVID-19 is known to have mild as well as critical courses requiring vv-ECMO therapy. Also, COVID-19 seems to be associated with hypercoagulability and thrombosis [1]. Indeed, our center as well did witness an increase of thrombotic complications especially in the extracorporeal circuit in these patients, particularly of the centrifugal pump. Thus, we investigated the rate of vv-ECMO complications in these patients.

**Methods:**
All COVID-19 cases admitted on our ICU who received vv-ECMO therapy were compared with vv-ECMO patients treated on our ICU during the years 2018 and 2019. Aside from baseline characteristics, duration of ICU stay and length of vv-ECMO therapy, all circuit related complications resulting in partial or complete exchange of the extracorporeal system were registered. Events clearly documented as non-thrombotic were excluded. Also D-Dimer measurements prior to these events were analysed.

**Results:**
In total, 66 patients were analysed, 55 non-COVID-19 vs. eleven COVID-19-related. To this date, six COVID-19 patients were still treated on our ICU. The two groups did not differ in age, BMI and severity of illness (RESP Score mean 0.89 vs 1.09, p 0.85). A significantly higher rate and probability of centrifugal pump thrombosis needing exchange could be observed in the COVID-19-group (see figure 1). In total, 16 centrifugal pump thromboses did occur in the non-COVID-19-group compared to nine in the COVID-19-group. In addition, the most recent D-Dimer measurements prior to the events were significantly lower in the non-COVID-19 group (mean 15.48 vs 26.59, p < 0.05).

**Conclusion:**
The coronavirus SARS-CoV-2 induced infection is associated with higher rates of thrombotic events of the extracorporeal system during vv-ECMO therapy and the medical team should be watchful to counteract these complications.

**References:**
Figure 1: Centrifugal pump thrombosis

- Probability of thrombosis
- vv-ECMO duration [hours]
- p<0.01

COVID-19
non-COVID-19