Covid-19 associated pulmonary aspergillosis (CAPA): HOH Protocol (version sept 2020)

Background:

- Significant uncertainties in diagnosis of CAPA: new disease, aspergillus part of normal oral microbiome (sputum cultures of no value, trachea aspirates of doubtful value), worldwide prevalence of CAPA unknown and there's a presumed low background prevalence of (invasive) aspergillosis on Aruba.
- BAL needed for more diagnostic certainty; but aerosol generating procedure (AGP), and endobronchial biopsies risky due to chances of bleeding (due to covid-19 itself and the LMWH treatment).
- Diagnostics sent once weekly to the Netherlands every Wednesday (last sample collection on Tuesday).
- The value of radiologic imaging (CT-thorax) has not been well established in CAPA or Influenza-associated pulmonary aspergillosis (IAPA) and therefore can never be the sole criterium on which aspergillus-therapy is started.

No treatment:

- Due to low-background prevalence in principle don't treat CAPA empirically on Aruba.

Consider treatment:

- Serum: Lateral-flow Device (LFD) aspergillus antigen POS (test usually available on microbiology lab Sasaki) or galactomannan > 0.5 (note: low sensitivity).
- BAL: any of these findings: 1) LFD aspergillus antigen POS or 2) galactomannan > 1.0, 3) endoscopic findings: airway plaques, pseudomembranes or ulcers 4) positive aspergillus spp growth in lavage fluid.

Definite treatment:

- Bronchus biopsy showing invasive fungal elements and Aspergillus growth on culture or positive Aspergillus PCR in tissue.

*Sources:
1) Verweij PE et al. International expert Review of IAPA in ICU patients and recommendations for a case definition. Intensive Care Medicine volume 46, 2020.
2) Verweij PE et al. Diagnosing COVID-19-associated pulmonary aspergillosis. Lancet microbe, June 2020.
3) Personal correspondence: J. Schouten MD PhD, RadboudUMC