4CPS-258: PHARMACOKINETICS ALTERATIONS IN FIVE CRITICALLY ILL PATIENTS ON EXTRACORPOREAL MEMBRANE OXYGENATION RECEIVING ISAVUCONAZOL

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BACKGROUND

- Extra Corporeal Membrane Oxygenation (ECMO) can modify drug pharmacokinetics and pharmacodynamics.
- We report five critically patients and known isavuconazol pharmacokinetics alterations induced by ECMO itself.

AIMS AND OBJECTIVES

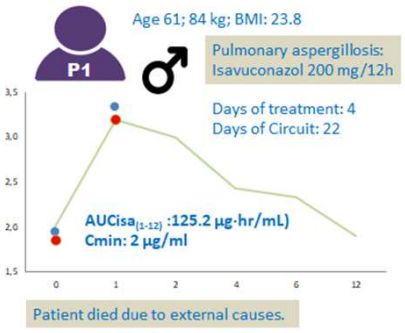
- Study the correlation between the dose of isavuconazol administered and its plasma drug concentrations (IsaPlasm).
- Secondary, analyzing differences in IsaPlasm at different points in the circuit to study drug sequestration.

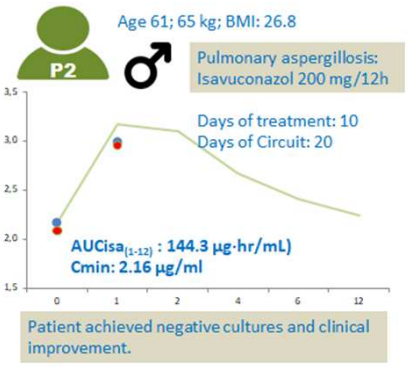
MATERIALS AND METHODS

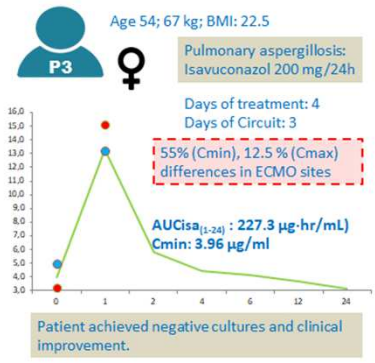
- Prospective study in critically ill patients treated with intravenous isavuconazol and receiving ECMO in the Intensive Care Unit (ICU) from August 2021 to August 2022.
- Isavuconazol area under the curve (AUCisa) was calculated using trapezoidal method. Blood samples were drawn from an arterial catheter and from ECMO circuit pre- and post-oxygenator at 0 (predose) and 1 hour (end of infusion), and from an arterial catheter at 2,4,6 and 12 hours after isavuconazol infusion.
- It was established a therapeutic goal of IsaPlasm 2.5-5µg/ml. Analytical method used was high-pressure liquid chromatography. Differences greater than 10% on ECMO sites were considered as a possible drug sequestration.

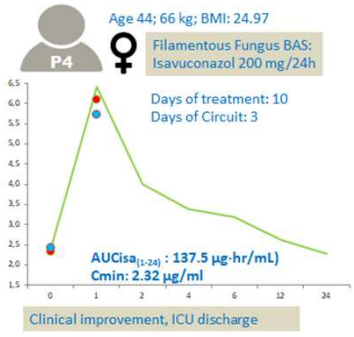
RESULTS

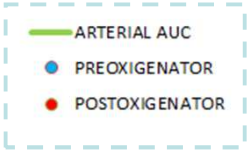
- 5 Covid-19 Critical ill patients treated with ECMO support. ECMO configuration used was VV in all cases.
- All of patients received loading dose of isavuconazole 200 mg/8h during 48h. No relevant drug interactions identified

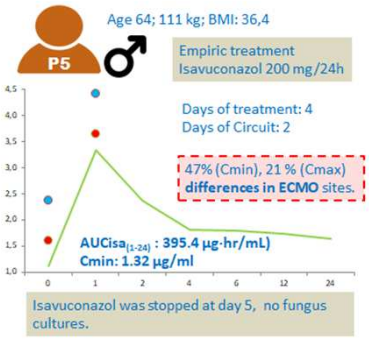












CONCLUSIONS AND RELEVANCE

- There was a significant sequestration of isavuconazole in ECMO circuit in two patients with young circuit.
- Patients required different isavuconazole posology to achieve therapeutic goals, suggesting the importance of therapeutic drug monitoring.