Case Report: A Case Of Fatal Disseminated Mucormycosis Infection In An Hiv-patient On Plasmapheresis For Atypical Hemolytic Uremic Syndrome

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INTRODUCTION

Mucormycosis is a rare but emerging mould infection, mostly associated with haematological diseases and immunosuppression. It has a high mortality, especially when disseminated and diagnosis is still very challenging. Until now there are no specific recommendations for diagnosis and management.

CASE PRESENTATION:

We present a 39 year old HIV-and HCV positive patient from Asian origin who had recently been treated with plasmapheresis and high corticoid dosing for a case of atypical hemolytic uremic syndrome/ thrombotic micro-angiopathy of unknown aetiology.

After an emergency appendectomy this patient was admitted on ICU because of a post-operative bleeding with need for massive transfusion. On ICU we diagnosed a recidivating thrombocytopenia and haemolysis. A new series of plasmapheresis was started because of this new episode of aHUS.

After a few weeks he showed signs of severe infection and bilateral diffuse pulmonary infiltrations on chest X-ray and chest CT-scan. Broncho-alveolar lavage (BAL) showed a positive antigen for *Aspergillus* and concomitant infection with *Pneumocystis carinii*. Intensive antifungal treatment was started (consecutively **Echinocandins, Voriconazol and Amphotericin B**) combined with antibacterial treatment. Despite this treatment there was an evolution to severe respiratory insufficiency with need for mechanical ventilation. New CT-scan showed slightly evolving **bilateral pulmonary infiltrations** but also **infiltrations in various abdominal organs**. Ampho B therapy, started because of *Cunninghamella* in ETA was continued although this infection could not be confirmed on BAL. Due to the combination of persisting kidney failure and haemolysis/ thrombocytopenia our patient underwent a **kidney biopsy which showed infiltration with fungi**. Our patient died due to a rapidly evolving sepsis before performing a planned open lung biopsy.

Post mortem autopsy showed **multi-organ angio-invasive mucormycosis (heart, lungs, stomach, spleen an kidneys)** with extended necrosis in all those organs.

Heart (GROCOTT)

Spleen (HE)

Stomach (PAS)

CONCLUSION:

- ✓ Mucormycosis is emerging in our population: HIV, diabetics, patients on immunosuppression
- ✓ Mucormycosis infection is still difficult to diagnose
- ✓ Early recognition of risk for mucormycosis and diagnosis with invasive techniques are necessary
- ✓ Think about mucormycosis in severe sepsis, resistant to therapy, especially in patients at risk (immunosuppression...)
- ✓ Although early diagnosis, therapy is still challenging with high mortality, especially in disseminated mucormycosis (> 90%)
- ✓ Surgical debridement is cornerstone of therapy next to antifungal therapy
- ✓ Invasion of stomach, spleen and liver, as in our case, is very rare
- ✓ Autopsy is valuable for diagnosis of missed conditions

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