**Mucor - Disease Description**

Mucor is a rare fungal infection that is associated with the growth of mucormycetes in virtually any part of the body, especially in immuno-compromised persons (Tathe et al., 2016). The development and progression of the disease is associated with iron metabolism, with deferoxamine cited as a predisposing factor which supplies the fungus with iron. Therefore, chelators are effective in the treatment of the disease, their mechanism of action being depriving the fungus of the iron molecules that are essential for their growth (Tathe et al., 2016).

Pulmonary Mucormycosis occurs when an individual inhales the fungal spores which subsequently grow on the surfaces of the alveoli and bronchioles. The spores produced from the growths trigger acute suppurative inflammation which worsens in pneumonic individuals (Ibrahim et al., 2012). Some of the recommended nursing interventions for Mucormycosis include oxygen therapy, isolation of the affected individuals, and respiratory therapy for the affected individuals. Also, the nurses should consider timely treatment of the affected patients to prevent rapid progression and worsening of their pneumonic states.

There are a number of lab assays that have been developed to diagnose the condition. The first approach is microscopic examination. This tool helps to identify the specific species on the tissue surface and to establish whether they are associated with Mucormycosis. The other methods include the use of RT PCR and molecular examinations. However, serological tests are widely used in most lab settings (Lackner, Caramalho & Lass-Flörl, 2014). The tests mainly employ the ELISA techniques and concentrate on the antibodies specific for the antigenic determinants associated with the *Aspergillus spp.* Other key blood tests used for Mucormycosis include immunoblotting and immunodiffusion both of which focus on antigen-antibody reactions.

Based on the laboratory results, the abnormal values include HCO3 of 29mEq/dL, the pH of 7.5 and PaO2 of 59mg. In addition the value for PaCO2 of 25mg is abnormal. These values indicate that the body is extremely alkaline. However, this is partially compensated through the hyperventilation. The WBC count of 15,200/mm3 is also an abnormal statistic that shows the body is infected, while the abnormal percentage of lymphocytes show that the patient is immunocompromized.

The first medication that is likely to be recommended for the patient is amphotericin B in lipid formulations. This drug is less nephrotoxic which makes it possible to administer it for a prolonged period. The alternative drug that can be used for the patient is amphotericin B deoxycholate. The drug is administered at a dosage of 1-1.5mg/kg/day, totaling to about 3g for an entire therapy. The drug is more affordable compared to alternatives. The third option for the patient is Pasconazole 400mg BID which is administered in a dose that totals to about 800mg/day (Spelberg & Ibrahim, 2010). The drug is preferred when a patient is not responding effectively to amphotericin A and B. It can also be used conjunctively for patients who were initially treated with amphotericin B.

The adoption of any of the three is dependent on the stage of the disease and the part of the body affected. In most instances, oral and intravenous routes are preferred for patients, with the oral route used only if the patients are responsive to IV treatments (Ibrahim et al., 2012). In other instances, tissue removal can be considered to treat epidermal cases of Mucormycosis.

**References**

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