Pneumonia dq question

Health & Medicine, Nursing

Discussion on Pulmonary Mucormycosis Mucor entails microbial genus of around 6 moulds, which are mainly located in the digestivesystems, decomposed vegetable matter, soil, and the plant surfaces. Majority of the mucor species are not able to infect human beings, because of their inability to develop in warm environments that are approximately 37 degrees Celsius. Thermotolerant species like Mucor inducus, in some cases result in opportunistic and rapidly developing necrotizing infections like zygomycosis. Mucormycosis mainly cause the nonresolving pneumonia, especially among the diabetic patients. The predisposing factors for mucormycosis are kartoacidosis, uncontrolled diabetes mellitus, solid tumors, and renal failure. Pulmonary mucormycosis generally takes place inhaling the fungal sporangiospores. The medical interventions for treating mucormycosis involve 3-pronged integration of surgical and medical approaches, together with addressing predisposing underlying conditions (Spellberg & Edwards, 2012).

2. Some laboratory test values are abnormal. The pH value is 7. 5 and this figure is high. The high pH values are abnormal and are mainly experienced among patients with high blood pressure (Kontoyiannis & Lewis, 2013). PaO2 is also abnormally low at 59mmHg. This illustrates a condition that is common among patients having pheumonia.

3. Three treatments are applied in patients with pulmonary mucormycosis. The treatments are; hyperbaric oxygen therapy, surgery and step down therapy. Hyperbaric oxygen therapy applies high concentration of oxygen, which hinders the development of mucorales in vitro. Surgery is also a treatment option. Sinus lesions are very significant and should be done with

minimal delay, due to the aggressive characteristic of the mucor infection. Step down therapy entails treatment of parenteral lipid amphotericin B. The treatment is antifungal. The medications involve usage of antifungal agents. Classic antibiotics like echinocandins are commonly used. Amphotericin B is also applied as liposomal formulations, with the aim of minimizing toxicity (Bitar & Van, 2010).

References

Bitar, D. & Van, Cauteren. (2010). “ Increasing incidence of zygomycosis (mucormycosis).” Emerg Infect Dis; 15(9): 1395-1440.

Kontoyiannis, D. & Lewis, E. (2013). “ Invasive zygomycosis: update on pathogenesis, clinical manifestations, and management.” Infect Dis Clin North Am; 20(3): 581-607.

Spellberg, B. & Edwards, J. (2012). “ Novel perspectives on mucormycosis: pathophysiology, presentation, and management.” Clin Microbiol Rev; 18(3): 556-569.