

Patient Undergoing Cardiac Surgery after Influenza Pneumonia

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Introduction

Influenza infection during surgery has been proven to have an impact on the results in terms of lengthened hospital stays and a higher likelihood of admission to a critical care unit. These individuals present an infection control issue in addition to the postoperative consequences. Although it is often recommended to postpone elective surgery until the patient has recovered from active influenza, this may not always be possible in cases of urgency, such as the one in this case.

This 63-year-old diabetic man with an inferior wall myocardial infarction and failed thrombolysis was referred to our hospital (a tertiary care facility in South India). When he arrived at the emergency hospital, he was discovered to be in serious respiratory distress with hypoxia (SpO₂ - 88 percent on room air), cardiogenic shock (BP - 80/50 mmHg, PR - 120/min), and cardiogenic shock. An urgent coronary angiography was performed on him, and it identified serious triple vessel disease. He was moved to a coronary care facility for additional management after having an intra-aortic balloon pump inserted. He experienced a fever, cough, and dyspnea two days prior to this incident, according to his medical history. We examined him for influenza because there was an ongoing pandemic, and the results showed that he had H3N2 infection (which was verified by PCR from endotracheal tube secretion). He was put on oseltamivir and moved to a respiratory isolation room, which was under negative pressure and had medical workers wearing N95 masks for interaction with the patient. His abnormal hemodynamics and triple vascular disease necessitated immediate cardiac bypass surgery. After his third day in the hospital, we transferred him to the operating room, where we made sure that everyone engaged in the procedure had had their annual influenza vaccination and was wearing a N95 mask. His case was heard at the OT's evening session, and it was made sure that no other cases were ongoing at the time. In addition, oseltamivir after exposure prophylaxis was made available to all healthcare professionals (HCP) involved in his treatment. After spending seven days in the hospital, he made a full recovery and was then released. During his stay, we did not observe any influenza spread in hospitals [1-3].

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Discussion

There is an abundance of information in the medical literature about different epidemiological, clinical, and preventative techniques for influenza, but there is relatively little material accessible on surgical problems with patients who have active influenza. According to a study by Spaeder et al, paediatric patients who had respiratory syncytial virus and active influenza during the perioperative period had longer hospital stays and were more likely to require emergency ICU admission. In another case study, patients who had influenza infection in addition to common surgical problems (traumatic epidural hematoma, intestinal obstruction, and cutaneous mucormycosis) fared poorly. Additionally, Galbraith et al. reported a case of acute appendicitis plus influenza that required a lengthy hospital stay [4].

Influenza is predominantly a community-based infection that spreads between homes and in public places. Flu is spread by large particle droplets, which necessitate close contact between the source and recipients (6 feet). Another method of indirect transmission is hand transfer over contaminated surfaces. However, aerosolization can happen in medical settings, particularly when a patient is using mechanical ventilation, which might result in airborne transmission. The administration of the influenza vaccine as well as rigorous adherence to infection-control procedures during patient care activities and aerosol-generating operations are key strategies for preventing the spread of the influenza virus among healthcare workers.

It is preferable to perform aerosol-producing procedures, such as bronchoscopy or endotracheal tube suctioning, in a room with negative pressure (minimum of 12 air exchanges per hour). The air from these rooms should also be exhausted directly to the outside or filtered through a high-efficiency particulate air (HEPA) filter before being recirculated. Finally, all health care professionals should wear respiratory protection that is equivalent to a fitted N95 filtering face piece. In this instance, the difficulty lay in preventing transmission in a surgical suite with positive pressure ventilation. The issue of infection management is not included in any of the short studies or case reports that have been done on surgical emergencies in patients with active influenza [5].

Conclusion

This instance illustrates the significance of infection management for influenza in operating rooms as well as the fact that activity should not be a barrier in surgical emergencies. Influenza is predominantly a community-based infection that spreads between homes and in public places. Flu is spread by large particle droplets, which necessitate close contact between the source and recipients. Another method of indirect transmission is hand transfer over contaminated surfaces.

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Conflict of Interest

None.

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