



A Case Report on High Contagious and Rapid Spread of Severe Acute Respiratory Syndrome (SARS) in Hypertensive Client: An Agent of Emerging and Reemerging Infection

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Introduction: Severe acute respiratory syndrome (SARS) is a potentially life-threatening. Severe acute respiratory syndrome (SARS) is the rapidly progressive respiratory illness which may be due to the pathogens that have potentials for large scale epidemics. MERSCOV AND H7N9 (Avian influenza) has been described by SARS. The causative organism of a SARS yet not being identified or it cannot be easily established. SARS increases morbidity and mortality which is associated with the COVID -19. COVID-19 can be complicated by severe acute respiratory syndrome (SARS) and may often cause multisystem involvement is encountered. SARS patients had mandatory needs of intensive care unit hospitalization and mechanical ventilation.

Main Symptoms and/or Important Clinical Findings: A 50 years old female was admitted in A.V.B.R.H. with chief complaints of cold, cough (dry, non-productive, non-bloody), vomiting, loose stool, breathlessness since 3 days. The patient was hypertensive for which she was taking Tab Amlol. After undergone certain investigation like complete blood test, HRCT, ECG and diagnosed as SARS and shifted to Intensive care unit.

The Main Diagnoses, Therapeutic Interventions, and Outcomes: A 50 years old female with

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severe acute respiratory syndrome (SARS) with chief complaints of cold, cough (dry, non-productive, non-bloody), vomiting, loose stool, breathlessness, the doctors manage her initially with antibiotic, steroids, vitamin C, multivitamin and anticoagulant and adequate nursing management.

Nursing Perspectives: The nursing interventions initiated for managing present case are monitor the vital sign i.e., blood pressure, pulse, respiration, temperature, maintain oxygen level and intake output. BIPAP site observed and ensure that the patient is comfortable. Patient assessed for GCS, Glucose level and sign of cyanosis, monitoring the ESR, D-DIMER, RT PCR, FERRITIN other investigations like HRCT.

Conclusion: In the Present case the patient of 50-year-old female with severe acute respiratory syndrome (SARS) it has been managed with the therapeutic treatment, right now the patient condition is worsened.

Keywords: HRCT; SARS; steroids.

1. INTRODUCTION

Severe acute respiratory syndrome (SARS) is the rapidly progressive respiratory illness which may be due to the pathogens that have potentials for large scale epidemics. MERSCOV AND H7N9 (Avian influenza) has been described by SARS [1]. The causative organism of a SARS yet not being identified or it cannot be easily established. SARS increases morbidity and mortality which is associated with the COVID -19 [2]. COVID-19 can be complicated by severe acute respiratory syndrome (SARS) and may often cause multisystem involvement is encountered. SARS patients had mandatory needs of intensive care unit hospitalization and mechanical ventilation [3]. Organ failure that is life-threatening as a result of a dysregulated host response to a suspected or verified infection, with organ malfunction [4]. Patients with SARS should get supplement oxygen treatment as soon. Use of cautious fluid management in SARS patients. Patients with SARS should be treated cautiously with intravenous fluids when there is no indication of shock, because vigorous fluid resuscitation may impair oxygenation [5]. Treat all probable infections causing SARS with an empiric antibacterial.

2. CASE PRESENTATION

A 50 years of old female presented with the chief complaints of cold, cough (dry, non-productive, non-bloody) vomiting, loose stool, breathlessness since 3 days. On examination she was oriented, conscious, and SPO2 was 90% to 93%. She was on BIPAP and high flow oxygen mask intermittently as she was not maintaining saturation. No any past history of fever or contact with suspected patients of COVID or any travelling history. The client was

having hypertension since 5 year for which she used to take Tab Amlol. The client has undergone diagnostic evaluation to confirm the diagnosis was Chest X- ray which reveals infection in the chest. The HRCT thorax was done in which the score was 22/25. The RTPCR was positive. The complete blood shows deterioration at Hb% also in the WBC it has been increased which was 17,000 cu.mm. The D- dimer was 4.74 mcg/ml which was also increased, the ferritin and ESR has also increased. After all the investigation the patient diagnosed as severe acute respiratory syndrome.

She was kept under observation in the intensive care unit and treatment given like Inj Remdesivir (antiviral) 200mg stat/IV and 100 mg OD for 4 days, Inj Meropenem (antibiotic) 1gm/IV/TDS, Inj Lomoh (anticoagulant) 0.4ml subcutaneous, Inj dexamethasone (steroids) IV/OD, Inj doxy (antibiotic) 100 mg/BD, Inj Pan (antacid) 40mg/IV OD, Inj Emset (antiemetic) 4mg/IVTDS, Syb Grilinctus 10 ml for cough and throat irritation and syp Zincovit as a multivitamin and nebulization of duolin and budesonide. The ability to restore a normal immune status is the most important prognostic factor. As in the patient the client was not responding to the treatment so prognosis may be poor.

3. CONTINUING CARE

A referral to the home care may be suggested for a hospitalized patient depending upon the physical condition of the patient and the availability of family assistance. The patients with SARS had impaired physical stamina and blindness which need home transfer assistance after hospitalization. The home care nurse's assessment of the home's physical environment is important. Suggestions to adapt the home

environment to meet limitation of the patient's activity are significant.

4. DISCUSSION

Some of the more serious damage caused by SARS may be due to the body's own immune system reacting in what is known as cytokine storm. As SARS is a viral disease, antibiotics alone cannot be effective against bacterial infection. Treatment of SARS is mainly supportive with antipyretics, supplemental oxygen and mechanical ventilation as needed. In the present case the patient is on BIPAP still the condition of the client was deteriorating. People with SARS must be isolated, preferably in negative-pressure rooms, with complete barrier nursing precautions taken for any necessary contact with these patients, to limit the chances of medical personnel becoming infected. In certain cases, natural ventilation by opening doors and windows is documented to help decreasing indoor concentration of virus particles. Severe acute respiratory syndrome (SARS) is a serious form of pneumonia. Infection with the SARS virus causes acute respiratory distress (severe breathing difficulty), and sometimes death [6].

Immunosuppressed patients' area high risk of infections. Systemic inflammatory response plays a main role in provoking viral-induced lung injury and could be largely responsible for the poor respiratory outcome in most patients, thus favouring transition to acute respiratory distress syndrome (ARDS) [7]. The infection which occurs during incubation and in the non-severe disease period, virus replication activates immune response. Thus, boosting the immune system at this exact moment could be the winning strategy to obtain complete virus clearance. At later stages, when severe disease develops, lung damage is induced by the systemic inflammation itself [8]. In the present the WBC level has been increased and in the X- ray it shows the infection which proves that the patient's immune system has been suppressed.

Even though corticosteroid use in COVID-19 pneumonia remains controversial, we increased our patient's dexamethasone dose as an anti-inflammatory agent. Immunosuppression in critically ill patients is still a matter of debate [9]. As recently highlighted by Ritchie and Singanayagam in their letter, the relationship between virus replication and systemic inflammation may be consequential and directly

related rather than an excessive response by the immune system. Therefore, the impact of immunosuppressive therapy is crucial in recipients [10].

5. STRENGTH

The Female patient of 50 years old not tolerating all the medication and not having better response around 1 month to the therapeutic treatment of the hospital which has been given.

6. CONCLUSION

Present case the patient of 50-year-old female with severe acute respiratory syndrome and their symptoms such as cough, breathlessness now patient's condition is worsened. SARS should be treated with caution. Detected early with the help of investigation to determine the cause in the symptoms. Severe acute respiratory syndrome (SARS) is a potentially fatal disease in which the lungs do not supply adequate oxygen to the rest of the body. SARS may strike persons of any age. It has the potential to become a very significant present health concern. Caring for SARS patients is not so easy. It is a very difficult for critical care nurses.

CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline patients consent and ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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