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A STUDY OF THE INCIDENCE AND ETIOLOGY OF SEPSIS IN A TERTIARY CARE HOSPITAL

General Medicine

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ABSTRACT

Sepsis is a major cause of morbidity and mortality in India. This study describes the etiology of sepsis in a tertiary care hospital. 100 patients admitted to medical intensive care unit were selected at random. 57 were males and 43 were females. Respiratory infections accounted for majority of the cases. Gram negative bacteria were most commonly isolated. Appropriate antibiotics should be instituted in a timely manner to reduce mortality.

KEYWORDS

Sepsis, infection, etiology

INTRODUCTION

Sepsis is defined as life-threatening organ dysfunction caused by dysregulated host response to infection.

Septic shock is defined as a subset of sepsis in which particularly profound circulatory, cellular, and metabolic abnormalities are associated with a greater risk of mortality than with sepsis alone. Patients with septic shock can be clinically identified by a vasopressor requirement to maintain a mean arterial pressure of 65 mm Hg or greater and serum lactate level greater than 2 mmol/L (>18 mg/dL) in the absence of hypovolemia. [1]

This study describes the incidence and etiology of sepsis in the Intensive Care Unit (ICU) of an Indian tertiary care hospital.

Sample Size

100 patients admitted in the medical intensive care unit (MICU) in ASRAM hospital in the months of June to December in the year 2018.

Inclusion Criteria

Age between 18 – 80 years

Exclusion Criteria

Surgical and gynecological conditions
Nosocomial infections

Methods

100 patients were selected at random from MICU who were diagnosed as Sepsis as per the recent definitions. Consent for the study was obtained. Required investigations were sent.

DISCUSSION

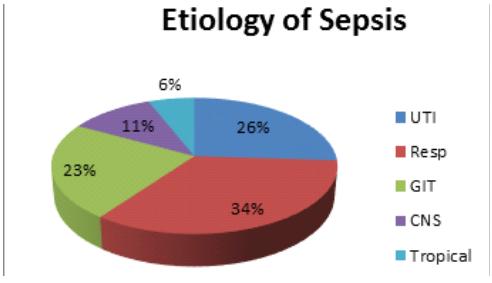
A total of 100 patients were selected among whom 57% were males and 43% were females.

Majority of the patients were in the age group of 31 to 50 years – 37%. Only 11% of the patients were above the age of 70 years.

Fever was the most common presenting symptom.

Respiratory tract infections accounted for majority of the cases – 34%. The incidence of urinary tract infections were 26%, gastrointestinal infections contributed to 23% and central nervous system infections - 11%.

Tropical diseases accounted for 6% of the sepsis patients.



Among respiratory tract infections, community acquired pneumonia had the highest incidence.

These findings are consistent with studies done by Chatterjee S *et al* [2] and Bhattacharya P.K *et al* [3].

Gram negative bacteria were more commonly isolated from the cultures. Fungal sepsis accounted for less than 2%.

Commonly isolated organisms from the culture were Pseudomonas and Klebsiella.

Gram positive bacteria are most frequently identified in patients with sepsis in the United States, although the number of cases of Gram negative sepsis remains substantial. The incidence of fungal sepsis has increased over the past decade, but remains lower than bacterial sepsis. [4]

CONCLUSION

The epidemiology of severe sepsis in developing countries differs significantly from developed countries. Since gram negative infections were more common, appropriate antibiotics directed against these organisms should be instituted. Fungal and Tropical infections should also be considered.

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