TIME TO DELIVERY OF ANTIBIOTICS IN SURGICAL PATIENTS WITH SUSPECTED INTRA-ABDOMINAL SOURCE OF SEPSIS OUTCOMES

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Introduction

Sepsis is a leading cause of critical illness and mortality worldwide. There is now an increasing awareness of the long-term physical, psychological and cognitive disabilities in patients who survive sepsis. Furthermore, there are significant health care and social implications.
Sepsis is defined as life threatening organ dysfunction secondary to a dysregulated host response to infection. For clinical operationalization the Sequential (Sepsis-related) Organ Failure Assessment (SOFA) score of 2 or more points represents organ dysfunction.[1]
The Surviving Sepsis Campaign[2] has incorporated the 3 and 6-hour bundles previously defined into an Hour-1 bundle to facilitate prompt identification and management of patients with suspected sepsis.

Methods and Materials

Analyse timing of antibiotic delivery for patients with suspected intra-abdominal sepsis from time of arrival in the Emergency Department and the correlation with clinical outcomes.
12-month retrospective study of patients admitted with intra abdominal source of sepsis from 1st April 2017 to and inclusive of 31st March 2018.

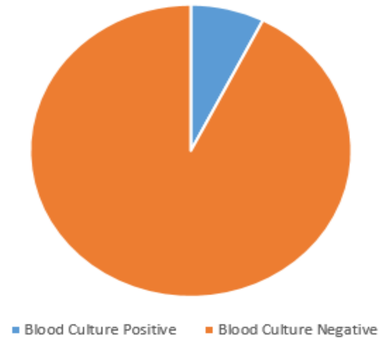


Figure 1: Correlation of intra abdominal sepsis with blood cultures

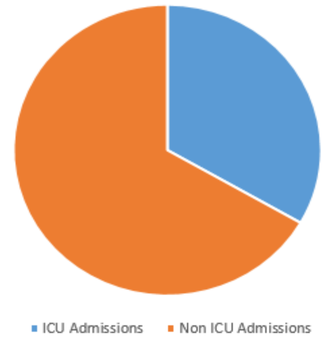
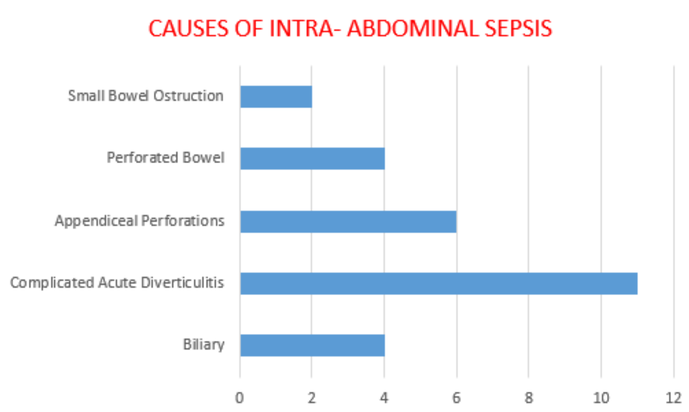
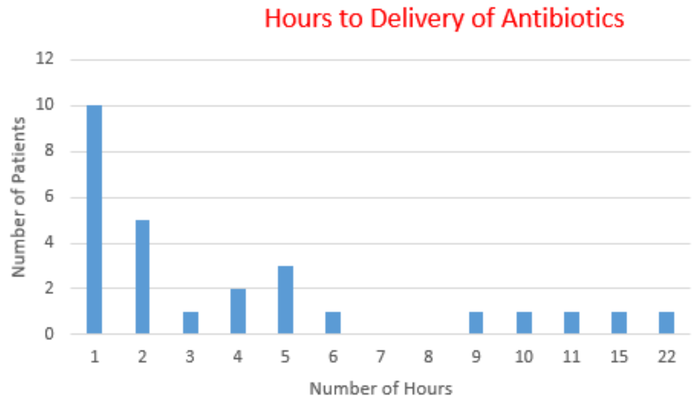


Figure 2: Correlation of intra abdominal sepsis with ICU admission



Results

The mean time of antibiotic delivery was within 4 hours (range 1 to 22 hours). The mean length of admission was 9 days (range 3 to 21 days). 89% of patients were commenced on appropriate broad-spectrum antibiotics. 7% of patients had a bacteremia with one-third of patients requiring an Intensive Care Unit (ICU) admission. 60% of patients required emergency operative intervention. There were no mortalities reported.



Conclusions

The target of delivery for broad-spectrum antibiotics was not within 1 hour[2] for two thirds of the patients admitted. This highlights a need for education around implementation of a sepsis bundle in the emergency department with a quality indicator set to enable feedback to modify clinician behavior related to early management of sepsis

References

1. Singer M, Deutschman CS, Seymour CW, et al. The Third International Definitions for Sepsis and Septic Shock. Journal American Medical Association; 2016. 801-810p
2. Levy MM, Evans LE, Rhodes A. The Surviving Sepsis Campaign Bundle: 2018 update. Intensive Care Med; 2018.

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