Introduction:

Nosocomial infections caused by *Klebsiella pneumoniae*, *Acinetobacter baumannii* and other gram-negative organisms have emerged as a major health problem globally especially in intensive care units (ICU). Continued surveillance and finding a suitable drug is of central priority. This study examines *Klebsiella pneumoniae* and other nosocomial infections in the intensive care unit of Aseer Central Hospital, determines their antibiogram, and evaluates predictors of mortality.

Methods:

The present investigation was a retrospective cross-sectional study based on data collected from patients in the intensive care unit (ICU) of Aseer Central Hospital, Saudi Arabia (2018-2019). Demographic, microbiologic, antimicrobial treatment and outcomes were collected from 150 patients with bacteremia, pneumonia, and other infections. A total of 150 patients were included (2018, n= 68; 2019, n= 82). Identification of isolates and *in vitro* susceptibilities were done by Vitek 2 system. Collected data were analyzed by descriptive statistics and regression models.

Results:

One hundred and fifty patients were included in our study (51 females and 99 males). The clinical specimens were mainly derived from respiratory (60.0%), followed by blood (16.7%), urine (11.3%), wound and skin swab (4.7%), CSF (2.7%), pus, discharge and swab (2.7%), and abdominal fluid and aspirate (2.7%). Mortality was 36.0% (54/150*100); *Klebsiella pneumoniae* was responsible for 27 case (27/54*100 = 50%). *Acinetobacter* spp. (35.2%) and *Pseudomonas aeruginosa* (9.3%) infections while the remaining organisms accounted for 5.6%. The overall *in vitro* resistance was 49.5% and shown an increase in 2019 (p <0.01).

Conclusion:

Half of the ICU mortalities were caused by *K. pneumoniae*. The frequency of *K. pneumoniae* and its resistance to antimicrobials was high and obviously rising as for other gram-negative bacteria. Our results suggest that attention should be paid to strengthen measures for better infection control measures.

References:

10 references are cited

Image:

Clustered bar count of dominant microorganisms causing ICU infections according to patient’s outcomes (2018-2019).
2019).