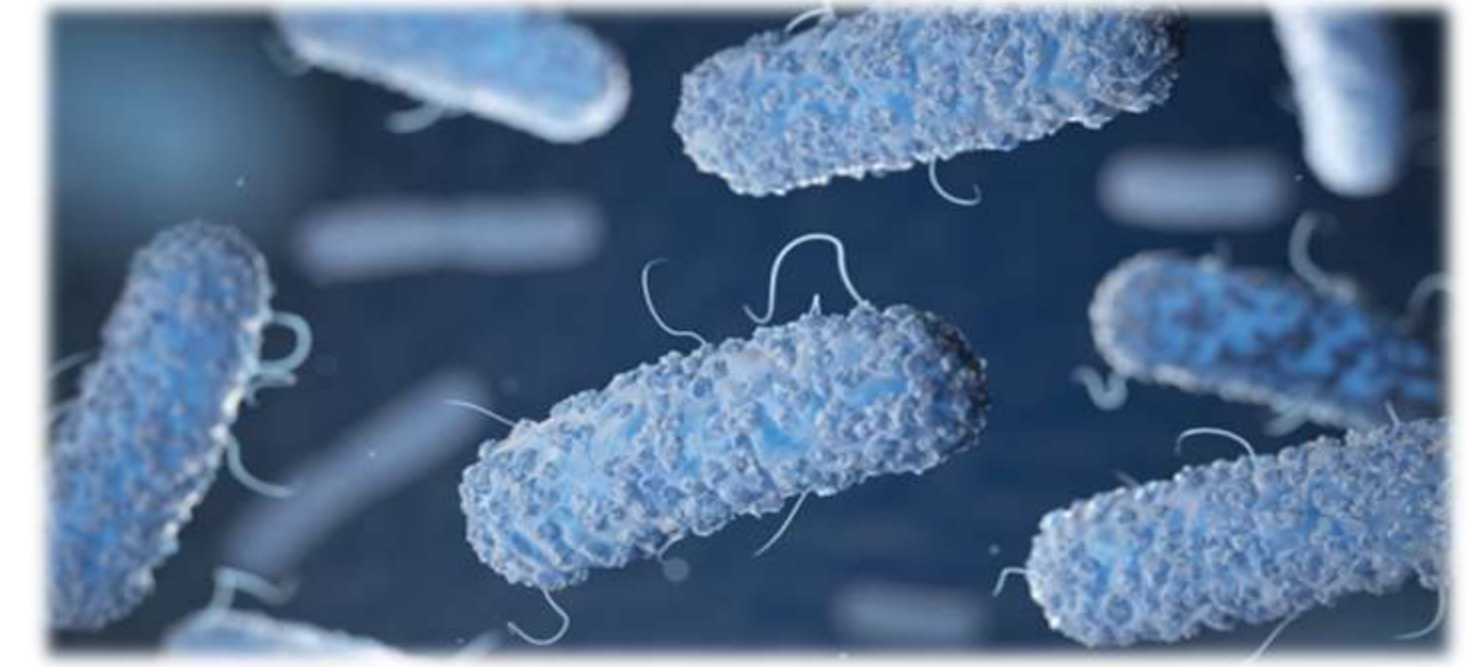


PREVALENCE OF CARBAPENEM-RESISTANT ENTEROBACTERIACEAE (CRE) AT A SPECIALIST HOSPITAL IN PERAK.

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BACKGROUND

Infections by Carbapenem-Resistant Enterobacteriaceae (CRE) have been continuously growing and become a severe threat to global health. CRE infection has limited treatment options and higher mortality. We report the prevalence of CRE at a 548 beds specialist hospital in Perak.

METHOD



A retrospective descriptive study on CRE data was conducted in Hospital Teluk Intan. The CRE data was extracted from the Multi Drug Resistant Organism (MDRO) surveillance reporting system and further analysis was carried out to look into the demographic distribution, risk factors and the clinical course of the CRE patients.

RESULTS

In year 2023, a total of 53 CRE were isolated from various clinical samples including 16 active screening rectal samples. There is no significant difference on gender distribution, their mean age was 51.3 years. The mean day that patient get colonized by CRE was 12 days from admission.

Among all, 16 (30.2%) were infection and 37 (69.8%) were CRE colonization.

The conversion rate of CRE colonization to infection in the hospital was 5.7%. And the in-hospital mortality of the patients with CRE infection was 75%.

Following a significant increment of CRE cases among the ICU patients, active surveillance had been carried out. In year 2023, the CRE positivity rate from active surveillance was 3.2% (16/496) from a total of 496 sampling.

CRE detection from day of admission	Total Number of Patients	Percentage
< 3 days	8	15.1%
3-7 days	15	28.3%
7-14 days	17	32.1%
14-28 days	11	20.8%
>28 days	2	3.8%

Table 1. CRE detection from day of admission

Distribution of CRE cases according to type of specimen

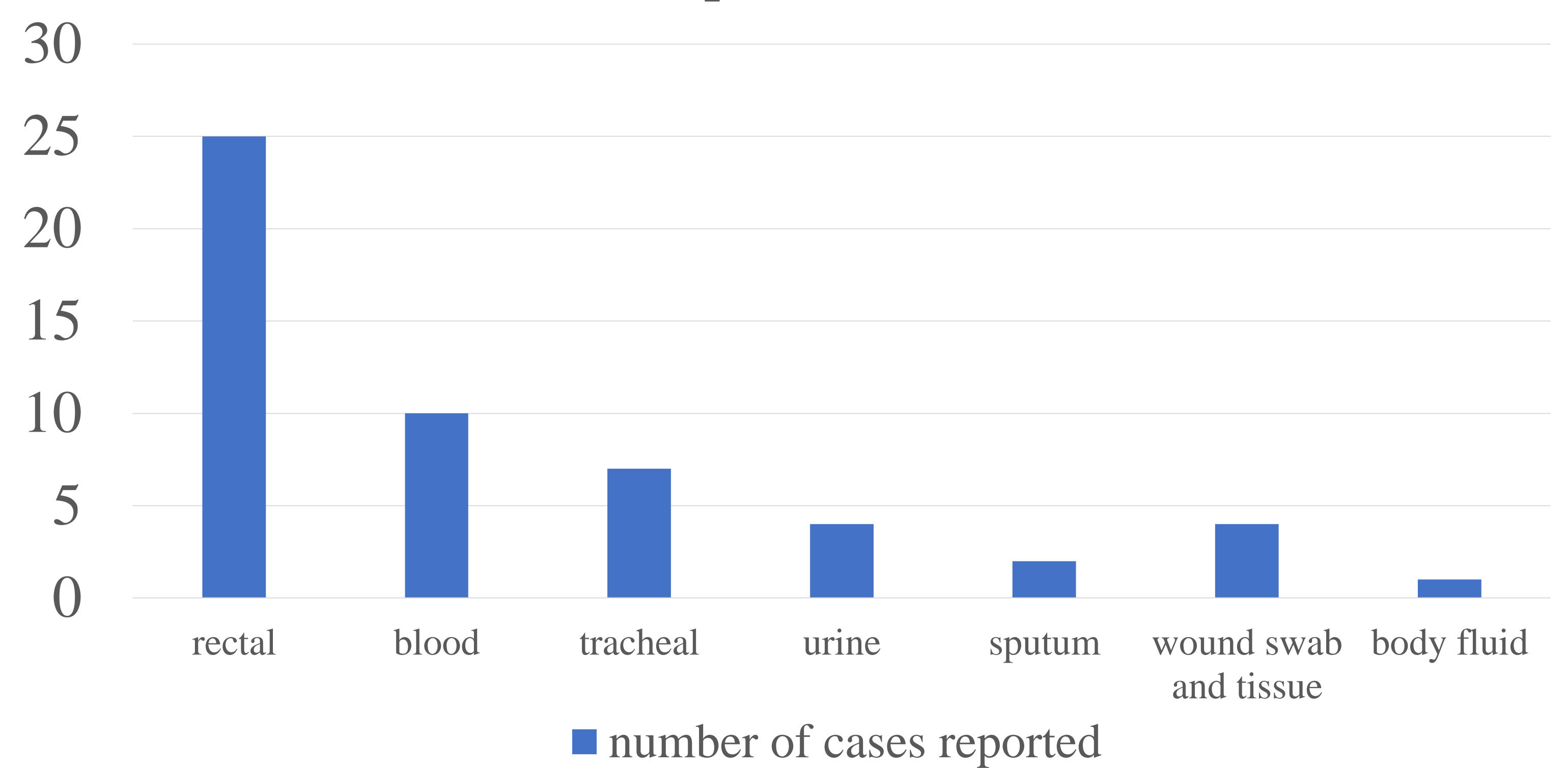


Chart 1. Distribution of CRE cases according to type of specimen.

Common Risk Factors associated with CRE cases

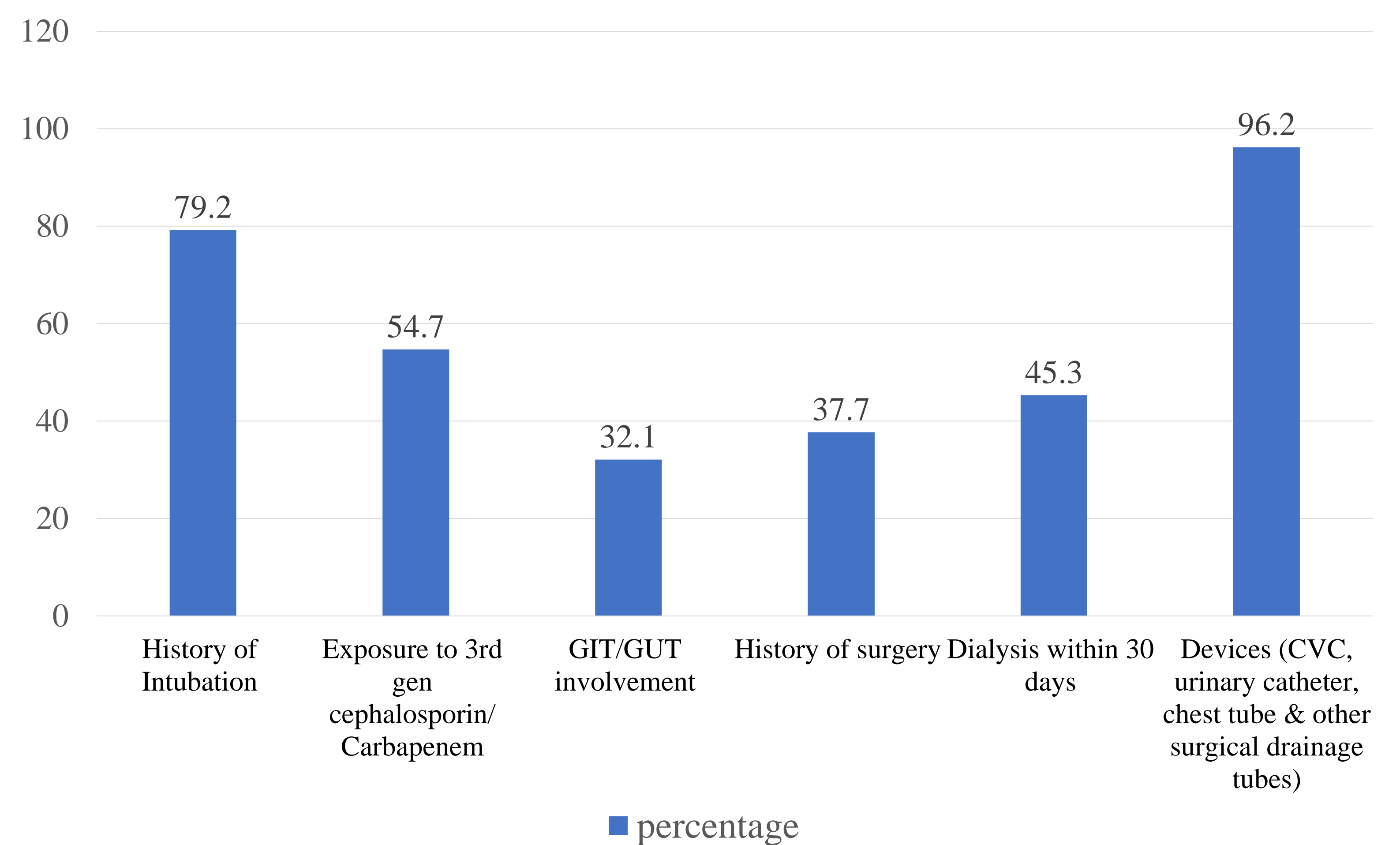


Chart 2. Common Risk Factors associated with CRE cases.

Conclusion

Mortality rate following CRE infection is very high. Knowing colonization status of patient might be worthwhile in preventing cross transmission and outbreak. Active surveillance results in significant cost pressure and the limitation in resources such as isolation room in the facility causing effectiveness of the IPC interventions after knowing the colonization status become debatable. Therefore, the best indicator for good control of CRE is most probably to look at the local epidemiology and compliance to basic IPC measures should be emphasized.

Reference

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