

## Carbapenem-Resistant Enterobacteriaceae (CRE) In Wound With Musculoskeletal Injury Patients. Are We Worried?

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### INTRODUCTION:

CRE is an important emerging threat to medical field. Some study showed mortality rate of CRE infection is as high as 50% even with combination of antibiotic therapy. We reviewed 19 CRE related patients with musculoskeletal wounds in our state hospital.

### MATERIALS & METHODS:

In this retrospective study, 19 patients were found fitting our criteria from our Orthopaedic wards in 2017. We recorded all patients' basic data, CRE screening results, antibiotic treatment, concurrent infection and wound outcome.

### RESULTS:

Out of 19 CRE related patients, 9 were defined as CRE-contact patient, which CRE screening turned out to be negative. The remaining 10 CRE-positive patients were divided according to wound type and sample source. Patients had positive culture from urine samples and rectal swabs, all showed negative CRE culture from their wound tissue.

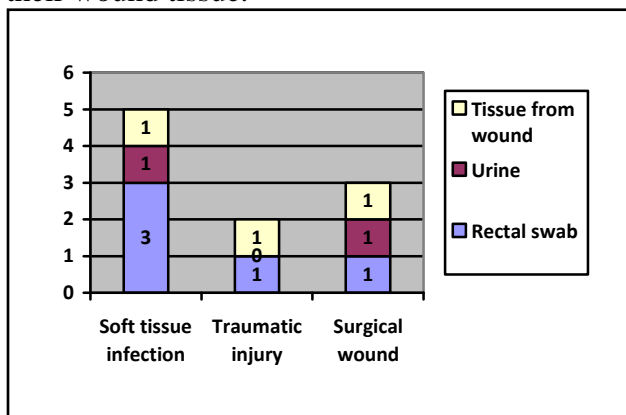


Figure 1 showing number of patients with types of musculoskeletal wounds and source of CRE-positive sample taken.

### DISCUSSIONS:

All patients who have contacted with known CRE sources must be screened. They are labeled as CRE-contact and isolated until screening is completed. In our study, all patients with CRE-positive wound tissue cultures recovered well with proper medical, surgical and nursing management. Even though some study has shown mortality in CRE infection patient as high as 26-44%<sup>1</sup>, our data showed mortality in CRE-positive patient with musculoskeletal wounds only 20%. With strict isolation protocol, infection from CRE-positive site does not necessarily will spread to musculoskeletal wounds. None of our patients with urine or rectal swab positive have CRE-positive tissue culture from their existing musculoskeletal wounds. CRE may exists as colonizer and shows no sign of infection. Thus, CRE-related patients must be monitored closely to prevent spread of CRE to other patient in the event of readmission<sup>2</sup>.

### CONCLUSION:

Although we do not see any spread of CRE infection from positive CRE sources to musculoskeletal wound, we should be vigilant and practice CRE infective prevention measures.

### REFERENCES:

1. Deaths Attributed to CRE infections. Matthew E. Falagas. Emerg Infect Dis. July 2014
2. Carbapenam-resistant Enterobacteriaceae, A Potential Threat. Mitchell J. Scwaber JAMA 2008.