

OUTCOME OF OPEN TIBIAL FRACTURES IN PAEDIATRIC POPULATION

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INTRODUCTION:

The management of open tibia fractures is challenging. The aim of this study is to determine the risk of infection and time to union of various subtypes of open tibia fractures in the paediatric population in our centre.

METHODS:

This is a retrospective study with prospectively collected data. All paediatric patients with an open tibia fracture between 2008 and 2020 were included in this study.

RESULTS:

There were 33 patients (Males 24, Females 9). The mean age was 9.7 (range, 2-16) years. There were 2 patients with Gustillo Anderson (GA) 2 and 31 patients with GA 3A fracture. Mean time to antibiotics was 3.4 (range, 1-12) hours post injury. Mean time to debridement was 22 (range, 5–84, SD 15) hours. Mean time to union was 5.2 (range 0–18) months. Twenty-nine patients had their antibiotics within an hour and four patients were given antibiotics after an hour post injury. Two patients developed superficial infection (6%) while another two developed deep infection (6%). All 4 patients who developed an infection had their index surgery more than 24 hours post injury. Of those with deep infection, one ended up in an above knee amputation while the other had a delayed union. The two patients with superficial infection were treated with oral antibiotics and went on to have an infection free union. No patients who had their index procedure within 24 hours developed an infection ($p=0.1026$).

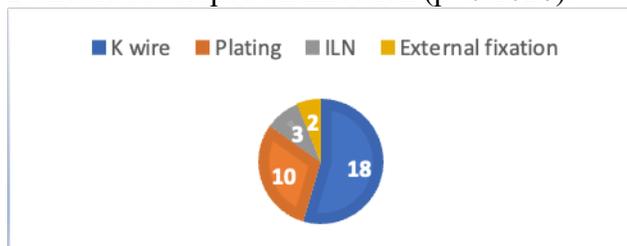


Figure 1: Definitive fixations

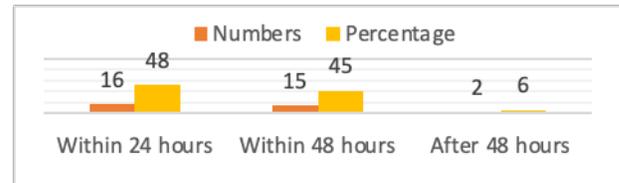


Figure 2: Time to debridement post injury

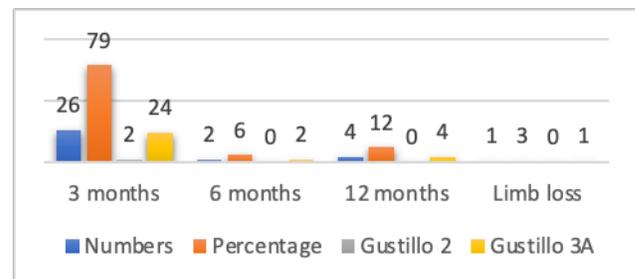


Figure 2: Time to union post injury

DISCUSSIONS:

More than 23% of patients who had their index surgery more than 24 hours post injury developed an infection. The delay in surgery was due to delay in peripheral hospital transfer and admission to ward.

CONCLUSION:

This study shows that union rate in the paediatric population is high and infection rate is low if patients have their index surgery within 24 hours.

REFERENCES:

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