INTRODUCTION:
Treatment of infected tibial nonunion presents significant challenge for orthopedic surgeons despite major advancements in fixation, soft tissue management, and antibiotic therapy. Management includes thorough debridement, stabilization of the fracture, and reconstruction of the bone defect. Thus, this is a case report of 3cm tibial lengthening using bone transport technique using Ilizarov ring fixator.

MATERIALS & METHODS:
Case report
Mr MF, a 20-year-old Malay gentleman, with no known medical illness, non smoker, alleged motor vehicle accident (motorbike vs car) on 19th April 2015 and sustained open comminuted fracture distal third right tibia-Gustilo IIIA. The initial wound debridement and external fixation was done on same day of accident to manage the wound and soft tissue. Three month post trauma, the wound is well healed but the fracture still not uniting and only minimal callus formation present. Hence, we proceed with internal fixation by using lock plate at the right tibia. Unfortunately 5 month after the tibial plating, noted seropurulent discharge coming out from operation site. Blood investigation shows leucocytes at 11,400/L, ESR at 2 mm/hr, and CRP at 0.99 mg/L. The x-ray show only minimal callus with loosening of screws. Diagnosis of osteomyelitis established, and the patient was operated for right tibia debridement, removal of implant, sequestrectomy, bone resection, and Illizarov external fixation.

DISCUSSIONS:
Limb lengthening using bone transport technique with Ilizarov has been suggested as the option in filling bone defects. It was chosen for this case after a thorough discussion with the patient as the most appropriate option that meets the primary treatment objective. The patient was young, cooperative, and has good family support. The patient’s age is of an importance in the adjustment of the distraction rate to avoid complications such as premature consolidation or exceeding the capacity of ingrowth of the vascular supply. Moreover, the patient was given comprehensive education, which is essential due to having the apparatus placed for prolonged periods of time and the need for regular follow-up and monitoring.

CONCLUSION:
While Ilizarov technique is considered as a minimally invasive procedure, its association with complications is relatively common. The management of this case was directed to achieve equal length of both limbs to restore the normal function. Although this case was particularly complicated, limb length was restored successfully.