***Abstract ID: 10 for KRD 2020***

**SUPRACUTANEOUS PLATING AS A METHOD TO SHORTEN EXTERNAL FIXATOR TIME IN BONE LENGTHENING AND BONE TRANSPORT – A CASE SERIES**

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**ABSTRACT**

Bone lengthening and bone transport are procedures that require long duration of wearing external fixator frame such as Ilizarov or monorail fixator. Prolonged time on frame (TOF) may result in patient discomfort and complications. In this study, four patients aged between 17 to 49 (average 30) years old, two femur lengthening, one tibia lengthening, and two tibia bone transport were carried out. All cases were met with problems during consolidation phase. We anticipated longer than usual TOF for these patients but by converting to supracutaneous plate, TOF became shortened significantly. After radiological union was achieved, plate was removed and duration of time on plate (TOP) was recorded. Average total healing time was 24.8 months, with 14.4 months of TOF and 10.4 months of TOP. Average length of bone gained was 7.6cm, and external fixator index (EFI) was shortened from 3.3months/cm to 1.9months/cm. During the time patients on plate, no screw tract infection was recorded, range of motion of adjacent joint and bone alignment remained unchanged. In view of good results in this study, we suggest supracutaneous plating as a method to shorten time on frame in bone lengthening and bone transport.

**Keywords**: Supracutaneuous plating, external fixator time, external fixator index