

A CASE REPORT ON CPT: FD NAIL AND BMP USAGE AS ADJUNCT WITH ILLIZAROF FIXATION TO PROMOTE UNION

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Introduction: Congenital Pseudoarthrosis of Tibia (CPT) remains one of the challenging cases in treatment. Union are difficult to achieve despite multiple adjunct usage in surgery or medical therapy. Patients are subjected to multiple surgeries that could not promise union leading to persistent morbidity and increase in financial burden.

Dicussion: 9 years old boy with Neurofibromatosis Type 1 has been under our care for right Congenital pseudoarthrosis Tibia since the age of 5 years. He had undergone multiple surgeries to promote union of the right CPT including insertion of illizarof and excision of the diseased CPT. Unfortunately, none availed. He underwent 2.5 cm excision of the right CPT in July 2019. The surgery also involved fibulectomy to be used as graft around the distal tibia excision site. Frassier-Duval Nail was inserted intra-medullary but unfortunately, due to distal position of the CPT and osteopenia, the male segment failed to attached at the distal right tibia epiphysis and had to inserted deep across the ankle joint into the talus and calcaneum. Illizarof frame was assembled and the tibia site was compressed. Combination of BMP and Fibula Graft was positioned around the CPT excision site. At 3 months post operation, there was abundant callus formation. Union was achieved at 5 months.

Conclusion: The usage of FD Nail is not only for realignment of the bone but it can also act as pillar to prevent new fractures as well as assist as telescoping device during the lengthening procedure in future. BMP has been proven to promote bone healing as the usage in treating CPT proves its versatility. Unfortunately, the cost of this single surgery is huge and it can be a major drawback in using illizarof, FD Nail and BMP at the same setting.