

## ANGULAR DEFORMITY IN TRANSTIBIAL AMPUTATION IN PEDIATRIC PATIENT

S Suresh Sri Ramulu<sup>1</sup>, Nik Alyani Abdul Adel<sup>1</sup>, Ardilla Hanim Abdul Razak<sup>1</sup>, Mohd. Shukrimi Awang<sup>1</sup>

<sup>1</sup>International Islamic University Malaysia

**Introduction:** Despite the advancements in both medical and surgical field to treat various pediatric conditions, there are some pediatric patients still require transtibial amputation as treatment of choice for lower limb congenital deformity. Stump overgrowth remains a challenge until the patient has achieved skeletal maturity. Here, we report our experience with tibia-vara deformity after congenital transtibial amputation and distal tibiofibular synostosis formation in an older pediatric patient.

**Discussion:** A 12 years-old boy born with a congenital amniotic band syndrome, presented to our clinic with complaint of pain during right below knee prosthesis wear for the past 1 year. Patient underwent revision surgery twice for right below knee stump overgrowth with soft tissue reconstruction. Upon examination of right below knee stump, noted tibia angular deformity with bony prominence over posterolateral aspect knee. Abnormal pressure points evidence by erythema over medial femoral condyle and lateral knee bony prominence. Plain radiograph of right knee showed lateral tibia bowing, distal tibiofibular synostosis, proximal and posterior fibula head migration. The fibula physis is at same level with proximal tibia physis. Patient underwent distal tibia-fibula osteoclasia, open wedge proximal tibia corrective osteotomy and re-alignment of the fibula head. Intraoperatively, lateral collateral ligament is preserved and restored; and one screw inserted to obtain proximal tibia-fibula fusion. Upon achieving bone union, patient referred for prosthetic fitting and gait training. Follow up at 6 months showed restoration of proximal tibia and fibula alignment with good soft tissue structure for prosthesis fitting, thus allowing pain free prosthetic ambulation.

**Conclusion:** Angular deformity may develop in the pediatric transtibial stump as a result of distal tibiofibular synostosis or unequal growth over proximal fibula and tibia physis, which may cause pain and affect prosthesis fitting. Thus, it is prudent to ensure clinical and radiological surveillance of children with transtibial amputation to detect and treat angular deformity to restore normal mechanical axis, improve prosthesis wear and decrease the need for prosthetic modifications.