

## Correction of Adolescent Tibia Vara by Opening Wedge Tibia Osteotomy

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### INTRODUCTION:

Adolescent tibia vara is a developmental disorder of the medial proximal tibia where excessive force on the physis leads to physal injury and eventually a three-dimensional deformity of the lower limb. It is seen in children older than 10 years old. 90% of these patients are obese. Here we report a case of adolescent tibia vara.

### REPORT:

12 years old obese boy presented with progressive bowing of the left leg with occasional pain for 2 years. He had a history of sudden weight gain one year prior. Otherwise, there was no history of infection or trauma to left knee.

Patient has no limitations in his daily activities. There is no family history of similar conditions. On examination, there was varus deformity of the left knee. Otherwise, no internal tibia torsion or procurvatum. There was no hyperlaxity.

On long leg radiograph of bilateral lower limbs, the left knee is in  $15^\circ$  varus. The meta-diaphyseal angle of Drennan is  $14^\circ$ , there is widening of medial tibia growth plate with minimal metaphyseal beaking. As adolescent tibia vara is unlikely to resolve spontaneously, and considering the remaining growth of our patient, corrective medial tibia opening wedge osteotomy and plating of left tibia was done.

At 3 months post operation, patient was able to ambulate without pain. Long leg radiograph showed corrected genu varus with bone union at osteotomy site.



Figure 1: Left genu varus seen clinically.

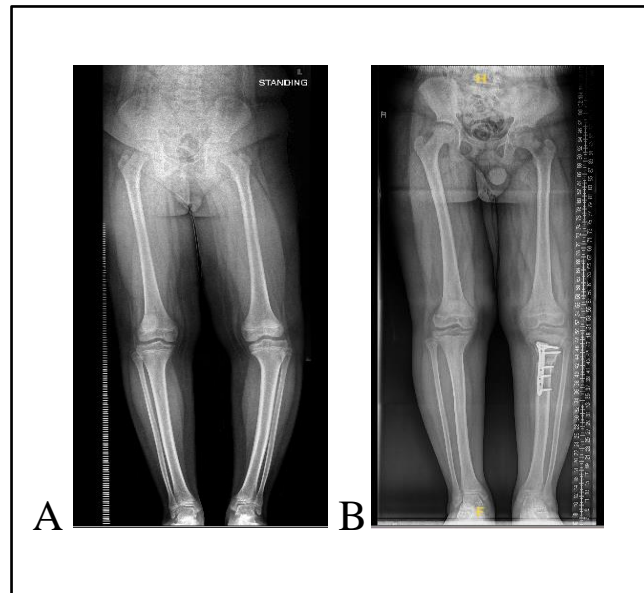


Figure 2: (A) Pre-operative radiograph. (B) Radiograph at 3 months post-operation showed corrected genu varus.

### CONCLUSION:

Unlike infantile Blount's, conservative treatment is ineffective in adolescent tibia vara. Surgical treatment options will depend on severity of the deformity and patient's growth remaining. The aim of treatment is to correct the deformity, improve function and reduce risk of premature joint degeneration.

### REFERENCES:

Bernstein and Schoenleber, Operative Techniques in Orthopaedics 2021; pg 100875