

Genu varum (Rt) genu valgum (Lt), post traumatic ankle varus deformity (Lt)

Abstract

Ilizarov Technique is a fantastic tool for correcting femoral varus, genu valgum and ankle varus. The case demonstrates an approach to large complex deformity in both right & left knee, and left ankle region. All of the aforementioned deformities were fully corrected by the help of Ilizarov Technique.^{1,2,3}

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Clinical history

A 21 years old boy sustained motor vehicle injury in the left inferior extremity at the age of 4. He was treated at Combined Military Hospital, Dhaka at that time because father is an Army personnel. Now, he was referred to Bari-Ilizarov Orthopaedic Centre for further

management, that is for correction of deformity and L. L. D. Plain X-ray and clinical findings showed his right genu varum deformity due to depressed medial tibial plateau and lower (Lt) tibio fibular varus and procurvatum deformity and left knee genu valgum. His father was anxious regarding his deformity correction.^{4,5}



Figure 1 (A-E) 21 years old boy, weight 102 kg with Genu Varum (Rt), Genu Valgum (Lt), Ankle Varus é procurvatum deformity (Lt)

- Front view of the patient with procurvatum deformity of tibia (Lt) é ankle varum
- Back view of the patient
- Patient Side view showing procurvatum deformity
- Radiograph of lower (Lt) tibio fibular varus and procurvatum deformity.
- Bipedal full length stress X-ray.

Problems before surgery

Obesity

Gradually worsening of deformity and skeletal maturity Right sided genu varum, left sided valgum and Lt ankle varus

Treatment plan

Two steps of surgeries were calculated.

1. Gradual medial opening wedge osteotomy in the upper Rt tibia with Ilizarov techniques.
2. Gradual correction of left genu valgum; and simultaneously gradual correction of procurvatum and varum deformity by osteotomy in true apex of the deformity and followed by lengthening.

What we hope to achieve

Our aim is to achieve

Waund gait

Eliminating any preexisting LLD

Allow full weight bearing é minimal stiffness of joints

Increase quality of life

Why Ilizarov method?

Ilizarov compression-distraction device provides flexibility and adaptability

Advantages of Ilizarov

Minimally invasive

Allow weight bearing from 1st POD

Early mobilization

Other advantages of Ilizarov

Modular

Customizable

Can treat multilevel, multiplanar and multi-directional deformities

Can articulate across the joints

During treatment images, radiographs and follow up



Figure 1 (F-H)

F. Patient lying on operation table during application of Ilizarov apparatus

G. Patient with Ilizarov apparatus

F. Correction of deformity with Ilizarov apparatus in stu

Technical pearls

1. 3 rings in Rt tibia é osteotomy done in between 1st and 2nd ring (tibia); osteotomy of fibula (both 2nd and 3rd ring)
2. 3 rings in left tibia and half ring in calcaneum and metatarsals. Osteotomy done in between 2nd and 3rd ring both tibia and fibula.

Post-operative management and rehabilitation

Exercises were encouraged just day after the pain permitted.

Cleansing the wire sites at regular interval.

Discharged with follow-up every weeks until radiological signs of union.

Apparatus removed with outdoor or indoor basis.



Figure 1 (I-L)

I. With long leg plaster immobilization after dismantling the Ilizarov apparatus.

J. Bipedal full length stress X-ray.

K. Final follow up after full correction (Front view of the patient).

L. Final follow up after full correction (Back view of the patient)

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None.

Conflicts of interest

The authors declare no conflicts of interest.

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