

Limb Deformity Correction Using Hexapodal OrthoSUV

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Treatment of complex limb deformity, which involves multi planes namely angular, length, translation and rotation were traditionally treated with gradual correction using circular fixator in our hospital. Whether acute or gradual deformity correction surgery, the final goal is to achieve mechanical and anatomical alignment within the normal range. This technique requires long learning curve for pre-operative planning and high technical skill for precision placement of hinges and distraction apparatus, hence the correction still can be difficult to achieved. Furthermore, due to prolong time on frame, we potentially expose the patient to higher risk for pin related complication. Since 2015 we start using a new generation computer assisted hexapod (Ortho-SUV) at our center for treatment of such cases. This system utilizes Single stage correction for multi planar deformity and fracture reduction which can be used for fast or gradual correction Mode. We presented a series of cases that has been treated using Ortho-SUV with various of indications:

- Long bones complex deformities
- Two level bone deformities
- Complex foot deformities
- Chronic dislocation and subluxations of large joints
- Extra articular fractures of long bones

The system works directly with the x-rays images input in the software incorporates standard tracing of anatomic and mechanical axes of bone fragments, planning and visualization. With this Ortho-SUV frame system, we found more accurate correction can be made with shorter duration of treatment, therefore less pin-related complication.