

Orthosuv Frame (OSF): Imaged Based Correction Of Tibia Deformities

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INTRODUCTION:

Deformity correction of long bones is often seen as a challenge and requires complex strategies. A useful tool in management of these deformities is the OrthoSUV Frame (OSF). 2 cases of deformity correction of the tibia using OSF frame is highlighted.

CASE REPORTS:

The first case is a 12 years old boy who had a malunion of the tibia due to a fracture after an accident (Figure1). He had developed a 2-plane deformity with varus of 30 degrees on AP view and a 50 degrees procurvatum on lateral view. A gradual correction of the deformity with the OrthoSUV Frame (OSF) was planned. After application of the OrthoSUV frame as seen in figure 1, the x ray image of the deformity is loaded onto the software which calculates and produces a formula for 'turning' of the 6 struts. (Figure 1,2)

Our second case is a 25 years old man who had congenital Blounts disease causing bilateral tibia vara. Patient underwent a proximal tibia corrective osteotomy and application of the OrthoSUV frame. The deformity was gradually corrected. Post op x rays are as shown in Figure 3.

Both cases produced good anatomical alignment of the tibia post correction enabling patients to return to their daily activities.

IMAGES:



FIGURE 1: APPLICATION OF SUV STRUTS AND THE DATA PRODUCED BY SOFTWARE FOR TURNING



FIGURE 2: PRE AND POST OP IMAGES CORRECTION OF MALUNION TIBIA



FIGURE 3: PRE AND POST OP CORRECTION OF BLOUNTS DEFORMITY

DISCUSSIONS:

Deformities of the tibia may be consequent to complications of fracture union, congenital problems or due to physal arrest. Using a hexapod allows of multi-axis correction in an expedited manner. The OrthoSUV Frame (OSF) confers a multitude of advantages. It allows for easier application as we can use rings from any manufacturer, and these rings need not necessarily be applied parallel to each other or perpendicular to the bone. There are also no fixed points to which the struts should be applied. The software which is imaged based on the x rays provides flexibility and ease of use to the surgeon.

CONCLUSION:

OrthoSUV Frame (OSF) is a useful tool in the management of complex deformities correction of the tibia.

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