Endosteal Autograft Fibula for Osteoporotic Varus 3 part Proximal Humerus Fracture

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Osteoporosis and medial comminution in a 3 or 4 part varus fracture pattern is associated with higher incidence of loss of reduction and fixation failures after ORIF of proximal humerus fractures.

In such a setting, additional endosteal support has been recommended by published studies to augment locked plate fixation. Different options including auto or allograft fibula, tricortical iliac crest grafts and even endosteal implants have been described for then purpose.

The published outcomes on use of endosteal fibular graft has been variable. Some studies have reported improved outcomes while some studies have shown no additional advantage.

Our surgical technique video demonstrates the use of an endosteal fibula for 3 part osteoporotic fracture with an incompetent medial cortex displaced into varus. The procedure is performed through an anterolateral deltoid split approach. The correct technique for use of the fibular graft in varus displacement pattern is demonstrated.