

Bone Transport & Treatment of the Docking Site: My Preferred Method

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- I. Bone Transport
 - A. History
 1. Perfected in its modern version by Gavril Ilizarov in the 1950's through 1980's
 2. Arrived to the west in the late 1980's.
 3. Early attempts at its use were fraught with problems due to poor understanding of the technique.
 - B. Current applications
 1. Has now matured into a useful tool in the treatment of bone defects.
 2. Currently with several methods for accomplishing this (circular fixation, unilateral rail transport, transport over a rod).
 - C. Indications
 1. Defects <2 cm, bone grafting still remains the gold standard.
 2. Defects 2 – 5 cm, dealer's choice between bone grafting techniques and transport.
 3. Defects > 5 cm, bone transport in experienced hands shows the greatest degree of predictable reliability (over 95% success rate in experienced nonunion surgeons' hands).
 - D. Technical tricks
 1. Proper corticotomy techniques
 2. Appropriate latency period
 - a. This needs to be tailored to the patient and his/her host conditions.
 3. Rate must be also tailored to host's unique physiological issues.
 4. Need to have appropriate fixation of the limb to grow good regenerate.
Often it is helpful to build redundancy in the construct to allow for the time required in the fixator.
 - E. Benefits of Bone Transport Method
 1. Extremely low risk for deep infection due to hyperemic state of limb during bone transport.
 2. At the end of treatment the patient is left with only his/her native bone.
 3. Leaves a limb with a ***“non implant dependent union”***.
- II. My preferred docking site management
 - A. Iliac crest bone grafting at end of bone transport (have been through the other options and like keeping success rate >95%).