

FRACTURE HEALING BY BIOLOGIC OSTEOSYNTHESIS

As long as there is adequate stabilization, even highly comminuted fractures will heal faster when the soft tissue envelope has not been disrupted. The rate of fracture healing and remodeling depends on several factors, including the degree of soft tissue injury. Preservation of the soft tissue envelope maintains blood supply to the fracture fragments and speeds healing.



Biologic osteosynthesis is a concept of fracture healing based on minimal disruption of the soft tissues around a fracture. Iatrogenic vascular damage to the fragments can be avoided by closed reduction and placement of an external fixator. Alternatively, an open approach and bridging of the fracture site with a buttress plate or plate-rod combination may be used. A plate used in buttress fashion provides rigid fixation of the proximal and distal bone fragments. The addition of a single intramedullary pin decreases strain and increases the fatigue life of the plate. In such cases, prolonged surgical time and tissue

injury necessary for reduction and fixation of small fragments is avoided.

