

Apparatus and Methods for Bone Fixation

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Technology description

Invention Summary

An apparatus and method of reducing and fixating bone fragments during osteosynthesis (the reduction and internal fixation of a bone fracture with implantable devices). An internal fixation plate has first and second arms forming an acute angle. Attachment locations adapted to secure the plate to the bone are located at distal portions of the arms. A third attachment location is located intermediate to the first and second attachment locations. The plate is used in combination with a tension wire method that uses monocortical screws with stainless-steel wire to reduce and fixate a fracture.

Invention Summary

The apparatus includes a bone plate for the fixation of a fractured bone having a plurality of fastener openings so that the bone plate may be secured across a reduced fracture. The bone plate is configured to flex in position to conform to the surface of the bone while providing sufficient stiffness in the plane of the device to resist forces and moments in the plane.

Advantages

The invention provides an internal fixation plate having both a rigid retainer portion that assists in aligning opposing bone fragments, and a flexible portion that conforms to the cortical surface of the bone to which it is to be fastened without requiring the surgeon to attempt to bend the plate prior to fastening it to the bone. The invention gives support to the fracture of a bone plate and has the ability to fixate the range of fractures that may be fixated by a bone plate, while being readily conformable to an irregular or curved bone surface.

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