



Medical devices

Bone fixation system for complex fractures

A researcher from the Biomedical Research Institute of Malaga (IBIMA) and the Andalusian Health Service (SAS) has developed a new tensor together with a new prestressed staple that allows a favorable arrangement.

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Description

Currently the repair of bone fragment fractures is performed by means of orthopedic staples that can be rigid or prestressable. Prestressable staples, thanks to the prestressing, offer greater stability to the fixation, causing compression at the fracture site.

A disadvantage of the prestressable staples described is that they generally have parallelepiped shapes, so that they are only suitable for the reduction of simple fractures, but they are not very useful for use in bone pieces with compact and rounded shapes.

For this reason, detachable prestressable staples are proposed, which allow the choice of their structure and number of legs. In particular, the "spider" arrangement, because this configuration is advantageous because it is particularly useful for certain fractures, such as patella fractures.

Furthermore, known devices for tensioning conventional prestressable staples are not useful for tensioning these "spider" shaped staples.

Therefore, a new tensioner has additionally been developed that pulls the legs of a spider staple at the same time as it holds the central plate, thus facilitating its installation in the intended bone structure.

The combination of the detachable prestressing clamps and a specialized tensioner for "spider" structures results in a fixation system for compacted and rounded fractures.



Advantages

- Allows treatment of bone fractures with complex/uncommon shapes.
- Provides an ideal fixation system for fractures of rounded structures, such as patella fractures.



Intellectual Property

Both technologies are protected by a national patent application with the possibility of international extension.



Aims

The researcher is looking for partnership and/or license agreement for the development and exploitation of the technology.



Classification

Area: Medical devices

Pathology: Musculoskeletal disorders



[Orthopedic surgery and traumatology \(IBIMA-TECH\)](#)