CASE STUDY.

NEWCLIP-TECHNICS

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FALCONE

XPERT WRIST 2.4:

Complex fracture of the lower extremity of the radius, on osteo-porotic bone: interest of polyaxial aiming with the Xpert 2.4 XS plate

Physician profile.

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XS plate designer for Newclip

Patient history.

The patient is an elderly woman (70 +), sedentary, with a normal weight and osteoporosis. She had an articular fracture AO : 23 C2 of the right radius, dominant side.
Non-surgical treatment was not an option, given the fracture displacement and the articular nature of the fracture: the loss of generated function would have led to an unacceptable loss of autonomy. Surgical treatment was chosen in order to create an anatomic reduction and allow a rapid return to daily activities.

A minimally invasive approach could be considered a satisfactory option for limiting devascularization and minimizing the postoperative course. This procedure was performed the day after the injury, after the placement of temporary immobilization. The evaluation was made by x-rays in different planes and by scanner. The XS plate was chosen because it allows a minimally invasive surgical treatment, the fixation being equivalent to a larger plate, and the possibility of polyaxial locking of all the screw holes (except for the oblong hole). Thus it is possible to maintain the reduction by osteosynthesis as close as possible to the subchondral bone flush with the watershedline, to potentiate the purchase of the epiphyseal screws, while avoiding an intra-articular path.

Surgery.

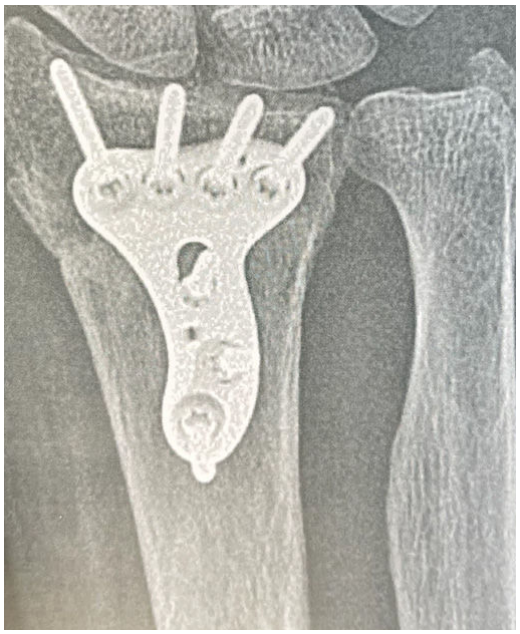
The operation was performed under locoregional anesthesia and under a tourniquet inflated to 250 mmHg, for a period of 30 minutes. This is a minimally invasive anterior approach using Henry's approach, over a length of less than 30 mm. There is no disinsertion of the pronator quadratus muscle, the diaphysis of the plate has passed below this muscle, once the reduction has been obtained by gentle mobilization of the fragments and temporary fixation with k-wires. The plate is positioned as close as possible to the watershed line and is held in place by pins through the specific holes. It is important to start with a polyaxial epiphyseal screwing first, with fluoroscopic control regarding the positioning of the screws using a sight as close as possible to the subchondral bone to obtain the best hold. Once epiphyseal screws have been placed, proximal diaphyseal divergent screws are placed, which allows progressive tilting of the epiphysis for metaphyseal reduction covering a natural anteversion, guided by the plate. The temporary pins are removed and the last fluoroscopic checks are carried out. The skin is simply closed with an intradermal overlock. A post-operative analgesic splint is put in place, self-rehabilitation is recommended as soon as the pain has subsided.

Post-operative follow-up:

A splint is worn for 1 to 3 weeks, depending on the intensity of post-operative pain. All movements are allowed, only the carrying of loads > 1.5 kg is not recommended until complete consolidation. If necessary, a physiotherapy prescription is given starting from six post-operative weeks.

Post-operative x-rays

At six weeks post-operative, the patient's complete autonomy is recovered. The loss of dorsal substance is completely filled by natural and spontaneous consolidation, without any graft having been necessary. At six months postoperatively, the mobility of the wrist is complete and identical to the contralateral side.



Physician conclusion.

The extra short distal radius plate enables a better osteosynthesis' quality to be performed with excellent fixation results, thanks to the distal screws angles' variability, from a simple metaphyseal fracture to complex epiphyseal and intra-articular fractures. The aiming guides thus make it possible to treat most fractures of the radius with this extra short plate allowing the soft tissues around the fracture to be preserved. The last advantage lies in the fact that the proximal diaphyseal screws are divergent and allow equivalent fixation than longer plates. Finally, if desired by the surgeon or the patient, the removal of the plate is also less complex as the screw axes are all projecting in the axis of the initial minimally invasive scar.

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Manufacturer : Newclip Technics – Case Study EN – Xpert Wrist – ED2– 06/2025 - Medical device EC: class IIb – CE1639 SGS BE - US Class : II
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