



New trends in distal radius fractures

Philippe A. Liverneaux¹

Received: 5 May 2018 / Accepted: 7 May 2018 / Published online: 18 May 2018
© Springer-Verlag France SAS, part of Springer Nature 2018

Authors who have contributed to the latest advances in distal radius fractures have agreed to participate in this special issue of EJOST. I would like to thank them in particular.

Many classifications have been used to describe distal radius fractures. So far, none has taken into account the patient and the accident. It is now done with the article written by Guillaume Herzberg which takes again the characteristics of the fracture, but adds to it the degree of autonomy of the patient and the kinetic energy of the traumatism. This holistic approach to distal radius fractures is essential for establishing the right therapeutic indications. Should the same therapeutic option be proposed for a posterior displacement articular fracture in a 28-year-old patient who suffered a motorcycle accident at 110 km/h and an 85-year-old patient who fell from her height treated with anticoagulants?

The main purpose of treatment is of course to restore the patient's autonomy as quickly as possible. Beyond this generality, what are the functional objectives in terms of pain, mobility and strength to obtain and what are the radiological objectives in terms of ulnar variance, volar tilt and articular step-off? Laurent Obert clearly states these objectives and leads us to rationally define a rationale.

Surgical treatment of distal radius fractures is fashionable. Is there still a place for conservative treatment? Alexandra Bruyère has reviewed all the literature on the subject and it is clear that no publication with a sufficient level of evidence can decide on long-term results. This article will try to show us if in the short term, conservative treatment gives as good results with fewer complications than surgical treatment.

Surgical treatment of distal radius fractures by locking volar plate is fashionable. Is there still a place for surgical treatment with pins? The experience of Emmanuel Camus

brings us a new light on the evolution of the pins. It is possible to lock them together exactly as the screws are locked on the plates. Under these conditions, are the clinical results as good as with the plates? Is immobilization with a splint or cast still necessary?

Nailing has been proven in the lower limb for decades. Does the success of the locked volar plates prevent hatching of the nailing at the distal radius? Dominique Persoons will tell us no and reports interesting results with locked nailing in extra-articular fractures.

The gold standard for the treatment of distal radius fractures by locked volar plate has become the gold standard. Laurent Obert will remind us of this, not without pointing out the serious complications, in particular the ruptures of the flexor tendons and especially the flexor pollicis longus when the plate is too radial, and the ruptures of the extensor tendons when the screws protrude too much from the dorsal cortex of the radius. He will tell us if the volar plates are so anatomical that they claim to be, and if they fit so well with all the various forms of anatomy of the distal radius.

If the indications of the external fixators become more and more rare in the treatment of distal radius fractures, Michel Rongièrès will tell us if it still exists, in particular on open fractures and very distal fractures, where the epiphyseal screws of the plates are impossible to put. External fixators are known to increase the risk of regional complex pain syndromes type I. Is this still relevant?

When the fracture is very comminutive, the bone very osteoporotic, and the patient very old, should we be content with a plaster at the risk of disrupting the fragile balance of the patient's autonomy, or must we cross the not to put in place a unicompartamental resurfacing prosthesis of the distal radius? Guillaume Herzberg will share his experience as an expert.

There is much talk of interest of wrist arthroscopic in these fractures. It considerably lengthens the duration of the procedure. So should specific indications be defined, reserved for young people with displaced articular fractures at high risk of associated intra-carpal lesions? Ludovic Ardouin will remind us of the main principles of this

✉ Philippe A. Liverneaux
philippe.liverneaux@chru-strasbourg.fr

¹ Department of Hand Surgery, SOS Main, CCOM, University Hospital of Strasbourg, FMTS, University of Strasbourg, Icube CNRS 7357, 10 Avenue Baumann, 67403 Illkirch, France

technique and its precise indications in the context of distal radius fractures.

Minimally invasive surgery is gaining more and more ground in all surgical specialties. Wrist surgery is no exception. Yuka Igeta will try to convince us that the mini-incisions are not only aesthetic interest in this indication, but also a technical interest, because the respect of the muscular and ligament attachments facilitates the reduction and the maintenance of the displaced bone fragments thanks to the ligamentotaxis.

Despite all these technical advances, there are still mal-unions of distal radius fractures that can severely compromise functional prognosis by limiting pronosupination. It is

well known that osteotomies of mal-unions of distal radius fractures are technically demanding. Frederik Verstreken will share his experience using 3D printing technology, which seems to greatly facilitate the surgical procedure and provide greater precision through the use of patient-specific cutting guides.

Compliance with ethical standards

Conflict of interest Philippe Liverneaux has conflicts of interest with Newclip Technics, Biomodex, Argomédical, Zimmer Biomet.