

Complications after ... Wrist Arthrodesis



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Conflict of Interest

FX Solution, Zimmer, Medartis, Evolutis, Wright,
Springer, Elsevier,
University hospital & Medical School of Besançon

Conflict of friendship ... thank's to
B Lefebvre ... and the Belgian Hand Group

Wrist Arthrodesis Complications

Total wrist arthrodesis : unlogical to compare with wrist prosthesis
The same joint but **Not** the same indication (for me)
Etiology ? RA or post traumatic

Partial wrist arthrodesis (4 CornerF ...) : logical to compare with IRC

Total Wrist Arthrodesis : Complications

N = 45 studies
N= 1,782 wrists reported

Complication rate : **29%**
Major = 19%
Minor = 10 %

DH Wei, & P Feldon J Am Acad Orthop Surg 2017
<http://links.lww.com/JAOS/A18>

« Major » Complications : 19%

Nonunion : 4.4% (78 wrists)

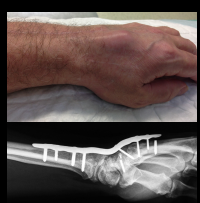
Ulnocarpal impaction

Carpal tunnel syndrome

Extensor tenosynovitis

Deep infection

Implant-related problems (persistent pain, prominent implants, fracture around implants)



Minor Complications : 10%

Superficial wound infections

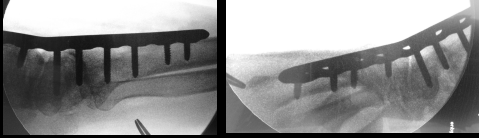
Carpal tunnel symptoms

Intraoperative fractures / Postoperative fractures

Asymptomatic radiographic loosening

How to prevent them ?

Implant-related problems : per op or post op !



Put first on 3rd metacarpal bone !
Per op X ray



How to prevent them ?

Carpal tunnel :

Caution in case of wrist fixed in flexion !
Release before / shorten



How to prevent them ?

Non union / fracture around implants :
Control the patient / choose the right plate ...



Partial Wrist Arthrodesis : Complications

4CF / PRC :

No pain but same motion than preop

	DF (pre)	DF (post)	PF (pre)	PF (post)	RD (pre)	RD (post)	UD (pre)	UD (post)
4CF	39	35	40	34	11	17	23	22
PRC	35	36	36	34	13	10	20	21

4CF, four corner fusion; DF, dorsiflexion; PF, palmar flexion; PRC, proximal row carpectomy; RD, radial deviation; UD, ulnar deviation.

Partial Wrist Arthrodesis : Complications

4CF PRC

Convert To fusion

Sepsis

Carpal tunnel

Non Union

Hardware problem

Osteoarthritis progression

Conclusion

TOTAL :

Rare complications !

Non union : unfrequent ! 4%

Implant-related problems

Control the patient / choose the right plate ...

PARTIAL :

No more complications than PRC (23%)

But different !

