



**57<sup>e</sup>**  
**CONGRÈS**

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# Pyrocardan® implant arthroplasty for trapeziometacarpal osteoarthritis in young patients (50 years old or less)

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# INTRODUCTION

Trapeziometacarpal osteoarthritis : 13% in the under 50 years old

=> No consensus in the literature for the treatment of young patients after failure of a well conducted medical treatment

⇒ The pyrocarbon implant, Pyrocardan®, is a valid medium and long-term solution for patients over 60 years of age

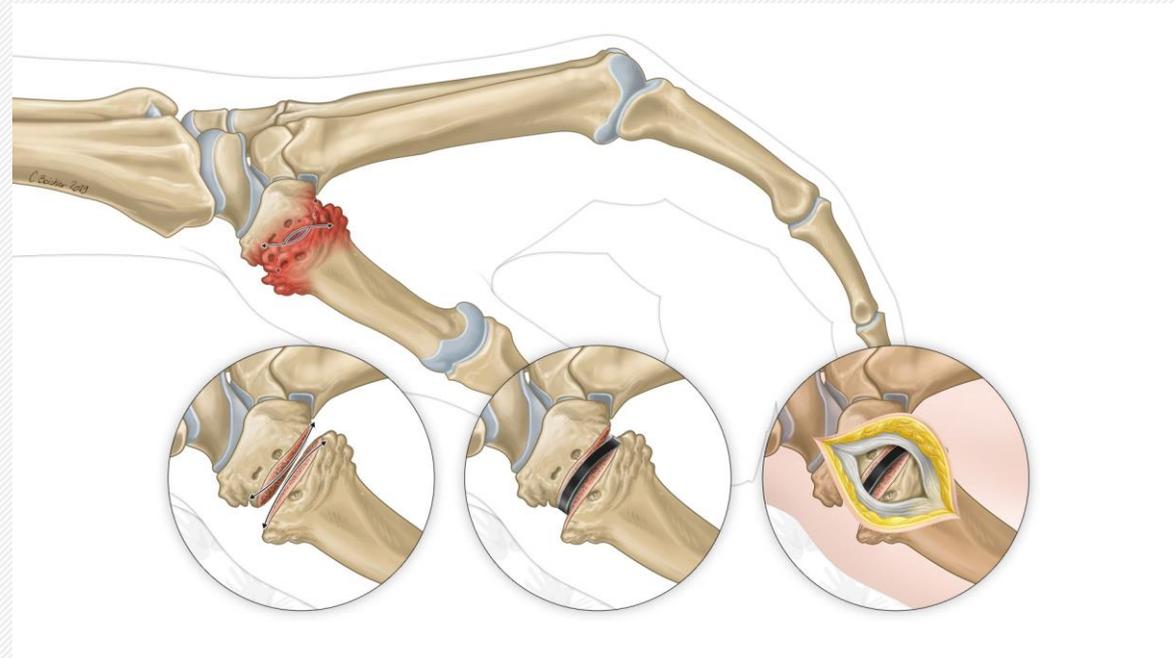
*(Logan et al. 2020, E. Gerace et al. 2020)*



# INTRODUCTION

## Objective :

To retrospectively evaluate the clinical, functional, and radiological outcomes in patients 50 years of age or younger treated with a Pyrocardan® implant for their trapeziometacarpal osteoarthritis.



# MATERIAL AND METHOD

Between 2009 and 2019

56 patients: 46 women and 10 men operated on, a total of 59 implants placed

34 implants evaluated in consultation

Average follow-up time of 46 months (24-72)

Average age: 45 years (17-50)

Eaton-Littler stage 2 osteoarthritis in 82% of cases

Dominant side: 16 cases (47%)

Heavy manual: 47%

# MATERIAL AND METHOD

## Assessment:

- Mobility, Strength, PRWE, Quick Dash
- Pre-operative, post-operative and revision radiographs:  
Face and Profile centered on the trapeziometacarpal joint according to Kapandji incidences

# RESULTS

- . No difference in strength or range of motion between the operated and contralateral sides
- . Kapandji at 9,7
- . Pinch at 6.6 Kg ( $\pm 2.9$ ) and Grip at 27 Kg ( $\pm 9.3$ )
- . Pain: 8 preoperatively to 1 at revision on the VAS
- . At last follow-up: QuickDASH at 19 ( $\pm 21$ ) and PRWE at 19 ( $\pm 19$ ).



48 year old patient, operated on the right, at 2 years post-operation

	Operated side	Contralateral side	p
Key Pinch (Kg)	6,6	6,9	0,47
Grasp (Kg)	26,6	27,3	0,49

# RESULTS

- . Return to work: 10 weeks (2-16) post-op
- . Overall satisfaction rate : 97%
- . No sinking or dislocation of the implant
- . A revision at 1 year post-op: installation of a trapezoid-metacarpal prosthesis following persistent pain after repetitive efforts (chronic hyperpressure).



Radiographs at 3 years post-op

# DISCUSSION

- . The Pyrocardan® implant allows to keep mobility, to bring indolence and to recover a strength comparable to the contralateral side
- . 97% of patients are satisfied with that procedure at an average follow-up of 4 years.

# DISCUSSION

⇒ The Pyrocardan® implant seems to us to be indicated in young patients because :

- . It is minimally invasive, and preserves bone stock and ligaments
- . It is perfectly well tolerated in the medium term because it does not wear out and does not cause an inflammatory reaction
- . It allows the recovery of a functional thumb comparable to the opposite thumb
- . Finally, it does not cut the bridges in case of failure, which was the case for one of our patients

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- Odella S, Querenghi AM, Sartore R, DE Felice A, Dacatra U. Trapeziometacarpal osteoarthritis: pyrocarbon interposition implants. *Joints*. 2014, 2: 154-8.

- Russo S, Bernasconi A, Busco G, Sadile F. Treatment of the trapeziometacarpal osteoarthritis by arthroplasty with a pyrocarbon implant. *International Orthopaedics (SICOT)*. 2016, 40: 1415-7.

# CONCLUSION



- Good functional results (mobility, pain, strength)
- Good clinical and radiological tolerance of the implant in the medium term
- Reliable implant for the treatment of trapeziometacarpal osteoarthritis in young and active patients

**THANK YOU FOR YOUR  
ATTENTION**

