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No conflict of interest
Objective: To evaluate the tolerance of a nerve regeneration guide processed from umbilical vessel surrounded by Wharton gelee, inverted, dehydrated and sterilized, in the treatment of digital nerve section.
Material and methods

- Phase II prospective multicentric study
- From January 2018 to June 2019
- Digital nerve section with gap > 2 mm
- Within 1 month after a traumatism

Clinical evaluation

| Clinical evaluation | s2PD, m2PD, Semmes-Weinstein Monofilament, Pain (VAS), Hyperesthesia, cold sensibility, numbness |

Functional evaluation

| Functional evaluation | Quick DASH |

At D+30, M+3, M+6 and M+12

Report of any adverse event
Results

- 20 nerve regeneration guides in 19 patients
- Age: 38 yo [19-65]
- Time since traumatism: 9 days [0-92]
- Nerve gap: 5.4 mm [2-20]

12 wrappings

8 conducts

1 or 2 cm long inverted arteries of NérvFIX (diameter 2 or 3 mm)
Complications

Not linked to the product.

1 infection after 10 days
- S. aureus
- Revision surgery
- No removal of the tube
- Similar functional result at 12 months

1 CRPS

1 delay of scar regeneration

2 edema and local inflammation
Results after 1 year

- $s_2PD: + 7 \text{ mm}$ for 82 \% ($p = 0.004$)
  
  (*paired test, two tailed, Wilcoxon signed rank test with continuity correction*)

- No tinel sign in 73 \% of the patients

- VAS: 0.4

- Hyperesthesia, cold sensitivity, paresthesia: 0.45 [0-5]

- Monofilament test: 18 \% 4g, 55 \% 2g, 27 \% 0.2g

- QuickDASH: 13 [0-45]
Discussion

- Good functional results
- Good tolerance
- Combination of the advantages of nerve conduct, with the biomechanical apport of proteoglycans and growth factors

- Conclusion: This study confirms the interest of NerVFIX in the digital nerve section.
- Further study in larger nerves?
Thank you for your attention