

Introduction

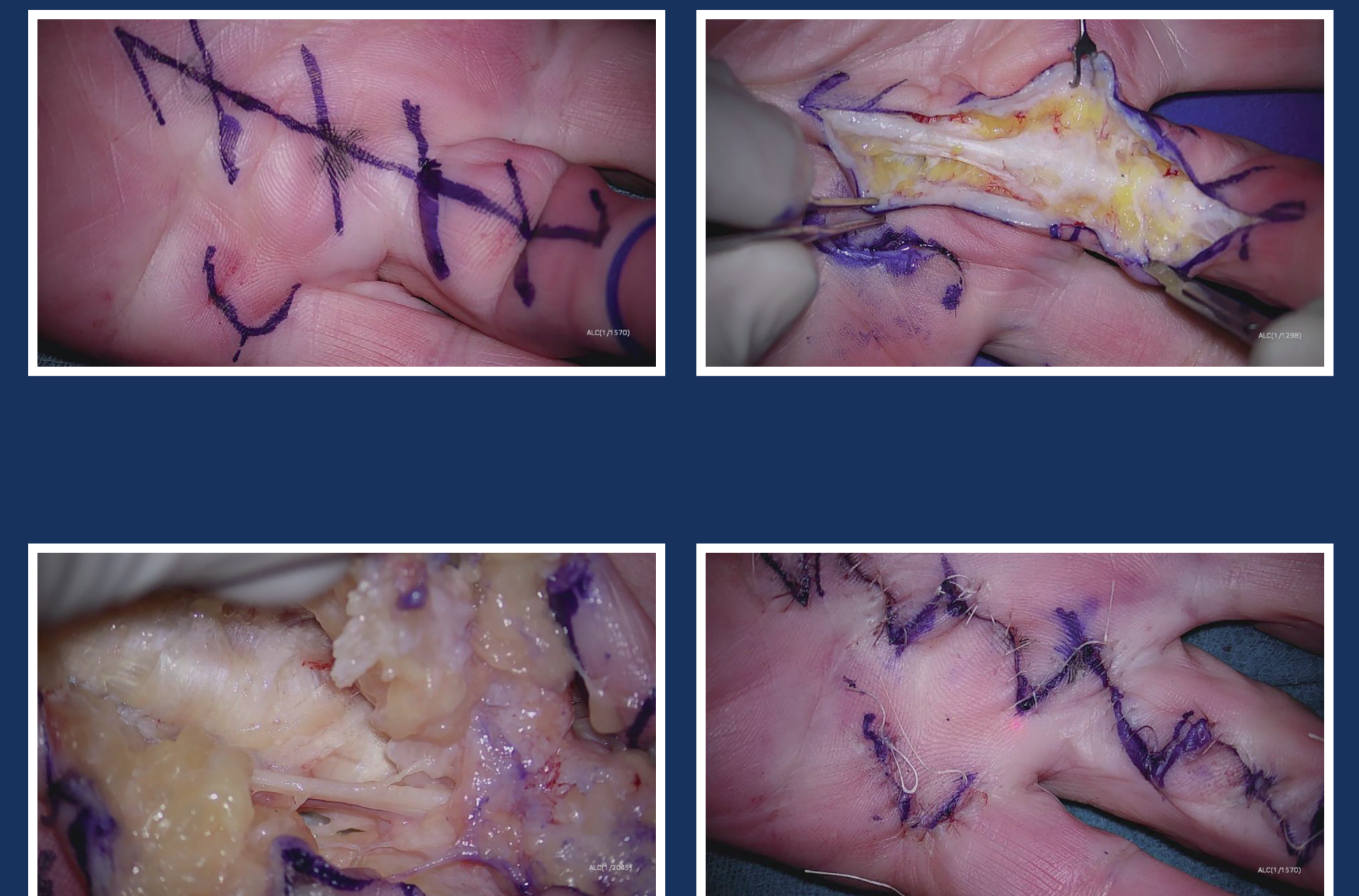
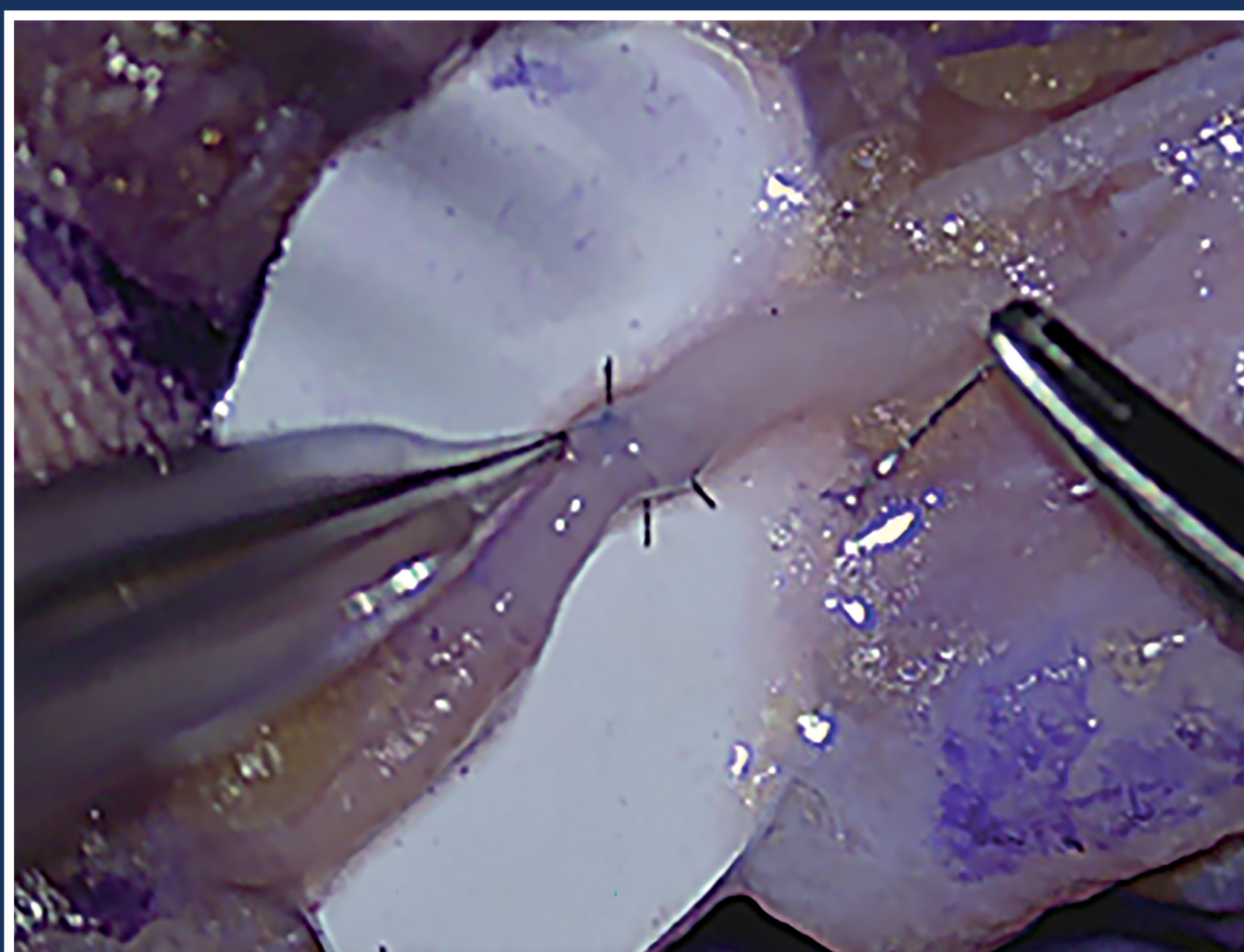
Microfasciectomy (MF) is a recently introduced term that emerged with the integration of microsurgery into the treatment of Dupuytren's disease (DD). MF may offer significant advantages over traditional fasciectomy in terms of surgical precision and outcomes. The improved visualization of small neurovascular structures, particularly in recurrent contractures following previous treatments, allows surgeons to operate with greater precision, which minimizes the risk of damage to vital structures such as nerves and blood vessels.

Methods

- Single-centre retrospective study of MF (2019 and 2021, excluding 2020) with historical cohort comparison (2010 and 2011).
- Only surgeries by a single surgeon to ensure technique consistency.
- Excluded: MCP contractures <20°, Moermans technique, carpal/cubital tunnel release.
- Baseline and treatment data obtained from medical records.
- Dupuytren diathesis score calculated per Abe's method.

Objectives

This retrospective study investigates whether MF is superior to traditional fasciectomy in reducing complications and improving long-term-outcomes in the treatment of DD.



Results

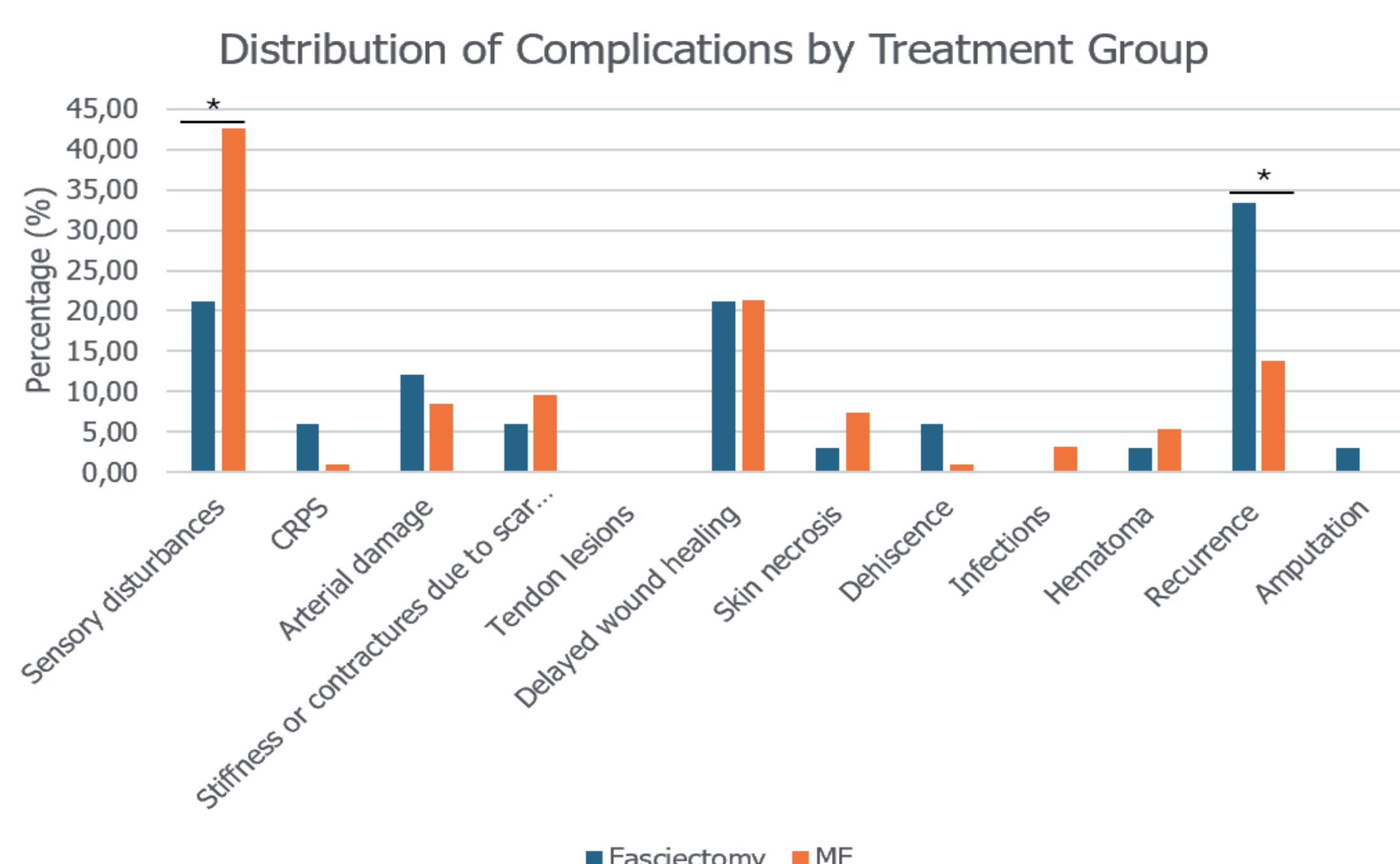


Fig. 1. Incidence of specific postoperative complications following fasciectomy and microfasciectomy. (* $p < 0.05$ and indicates a statistical difference)

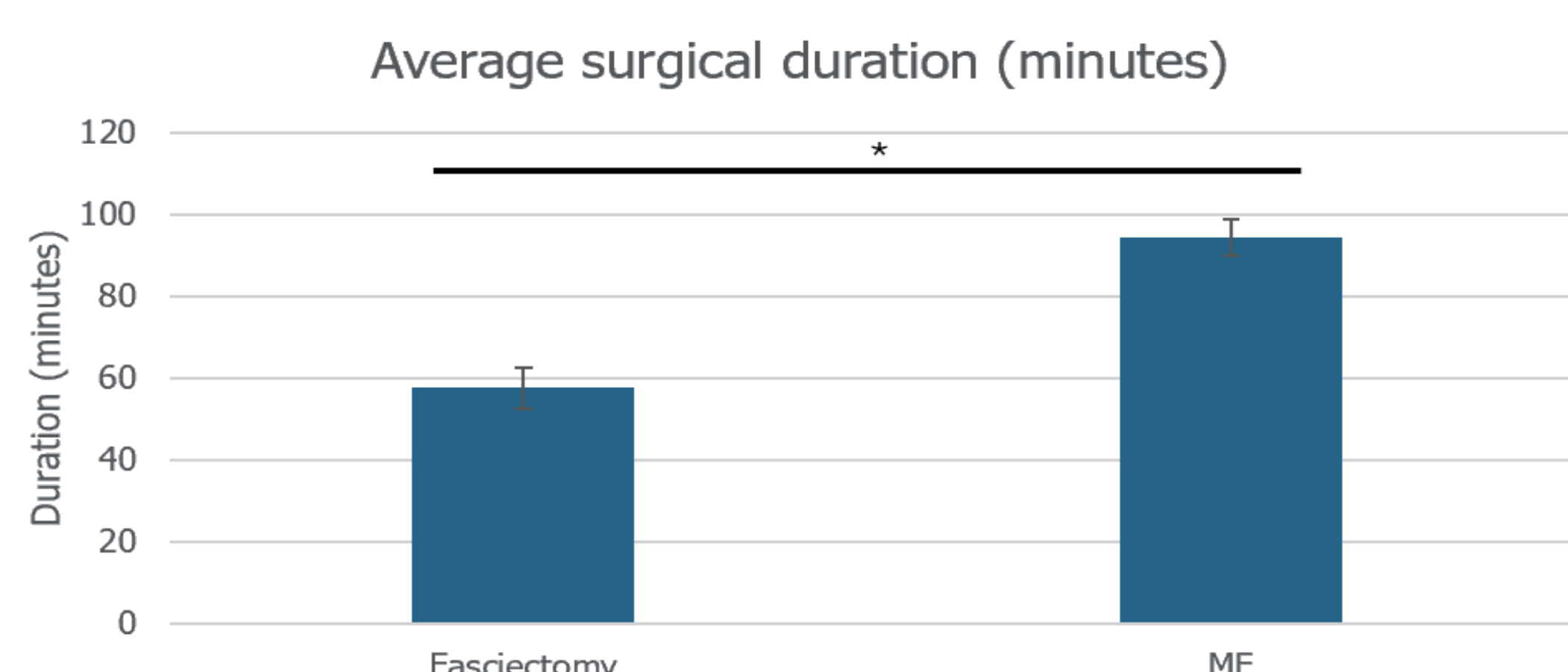


Fig. 2. Average surgical duration (in minutes) for fasciectomy and microfasciectomy. (* $p < 0.05$ and indicates a statistical difference)

Cohorts

- 33 patients underwent fasciectomy vs. 94 patients underwent MF
- No significant differences in age or sex
- Dupuytren diathesis scores were higher in the fasciectomy group (4.3 vs. 3.2; $p = 0.0105$)

Complications

- Overall complication rates were comparable in fasciectomy (66.7%) vs. MF (69.1%), but sensory disturbances are more frequent in the MF group ($p = 0.0483$)
- Fewer recurrence cases reported with microscope use (13.8% vs. 33.3%; $p = 0.0275$) (Fig. 1)

Surgical duration

- MF procedures lasted on average 62% longer than fasciectomy (93 vs. 58 minutes; $p = 1.7e-06$) (Fig.2)
- Surgical duration increased proportionally with the number of fingers treated ($p = 0.0005$)

Follow-up

- The mean follow-up time was 15.46 weeks for the MF group and 10.36 weeks for the fasciectomy group ($p = 0.0062$)

Conclusion

- This study compares MF and fasciectomy for Dupuytren's contractures.
- MF had a longer surgical duration (62% longer).
- No difference in number of complications (66.7% vs. 69.1%).

- Fewer recurrences in the MF group (13.8% vs. 33.3%).
- Longer median follow-up in the MF group (15.46 vs. 10.36 weeks).
- Biases may arise from time differences; RCTs may provide clearer results.

Conflicts of Interest:

- HH
 - Motivated student
- ID:
 - Fidia Ltd, Milan-IT Advisory Board Consultant
 - Clinical Research Grant FWO Flanders (grant number 18B4222N)

References:

1. Degreeef I, Vande Voorde K, Van Nuffel M. Microfasciectomy in Dupuytren disease: microsurgery in the evolution towards safer and more efficient fasciectomy and hand surgery. EFORT Open Rev. 2023; 8:291–7.