E-Poster

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A Cadaveric Study of Ultrasound-Guided Non-Incisional Trigger Finger Release With Smartwire

Topic: Miscellaneous

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BACKGROUND

This study aimed to investigate the effectiveness and safety of ultrasound-guided non-incisional thread trigger finger release on cadavers using a Smartwire.

METHODS

Ultrasound-guided non-incisional thread trigger finger release was performed on 12 fresh cadaveric hands, including 12 thumbs and 48 other fingers. Two experts, experienced in ultrasound-guided thread transecting technique, performed the procedures independently. The distal-to-proximal and proximal-to-distal approaches according to the direction of procedure were equally performed in six hands each to determine which approach is safer and more effective. After the procedure, anatomical analyses were conducted by a blinded anatomist. The presence of a dissected A1 pulley and any damage to adjacent structures was assessed.

RESULTS

Among the 60 cadaveric digits, 52 digits (86.7%) showed complete resection of the A1 pulley. The success rate for the thumb (66.7%) was relatively lower compared to that of the other fingers (91.7%). The distal-to-proximal approach demonstrated a higher success rate (96.7%) than the proximal-to-distal approach (76.7%). Anatomical analysis revealed clear and sharp incisional margins of the resected A1 pulley, with only one minor flexor tendon injury observed in the proximal-to-distal approach.

CONCLUSION

Ultrasound-guided non-incisional thread trigger finger release using Smartwire is a safe and effective procedure, particularly with the distal-to-proximal approach

Statement of Disclosures

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