The risk to the cutaneous nerve branches in the anterior (Wagner) and snuff-box approaches to the trapezium: a cadaveric study

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Abstract

We compared the risk with the subcutaneous nerves with the anterior (Wagner) and snuff-box approaches to the trapezium in cadavers. Branches that crossed tattooed incision markings or lay within 1 cm of the markings were identified on six matched pairs of fresh-frozen cadaveric hands. Their distance from the proximal end of the incision was recorded. For anterior incisions, there were 20 vulnerable branches in total, at a mean distance of 22 mm from the proximal end of the incision. A total of 13 lay in the distal half of the incision. For snuff-box incisions, there were 18 vulnerable branches in total, at a mean distance of 11 mm from the proximal end of the incision, with 17 of them lying in the proximal half of the incision. Neither incision is without risk to nerve branches, but our study suggests a lesser risk of subcutaneous nerve damage with the snuff-box approach and highlights the greater risk in the proximal half of this incision.