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Wade, RG orcid.org/0000-0001-8365-6547, Wormald, JCR and Figus, A (2018) Absorbable sutures for skin closure after carpal tunnel decompression: A Cochrane review summary. *Journal of Plastic, Reconstructive & Aesthetic Surgery*, 71 (12). pp. 1816-1834. ISSN 1748-6815

<https://doi.org/10.1016/j.bjps.2018.08.006>

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Title

Absorbable Sutures for Carpal Tunnel Decompression: A Cochrane Review Summary

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Competing Interests

None declared

Key words

Carpal tunnel syndrome; carpal tunnel decompression; surgery; hand; Cochrane; systematic review; meta-analysis; sutures; closure; outcomes

Compliance with Ethical Standards

Funding

Ryckie Wade and Justin Wormald are Academic Clinical Fellows in Plastic & Reconstructive Surgery, supported by the National Institute for Health Research (NIHR). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health. AF has no funding to declare.

Conflicts of Interest

There are no conflicts of interest.

Ethical review

Ethical review was not required as this is a review of published literature. Further, this article does not contain any studies with human participants, which were originally performed by any of the authors.

Dear Professor Hart,

Carpal tunnel decompression (CTD) is the most common elective hand operation, with approximately 73,000 procedures performed annually in England¹. After CTD, skin closure may be achieved with absorbable or non-absorbable sutures. Our Cochrane review² collates the evidence comparing absorbable versus non-absorbable sutures for skin closure after CTD and we have summarised our findings below.

We included five randomised trials (255 participants) from Europe. All studies were at high risk of methodological bias and the certainty of the conclusions (GRADE) from the evidence was very low. However following open CTD, there was no difference in pain scores between absorbable and non-absorbable sutures at 10 days (standardised mean difference 0.03 [95% CI -0.43 to 0.48]; $I^2=43$; Figure 1) or 6 weeks (standardised mean difference 0.06 (95% CI -0.72, 0.84); $I^2=84$ %; Figure 2). Ten days after endoscopic CTD, pain may be slightly less with absorbable sutures (SMD -0.81 [95% CI -1.36 to -0.25]). There was no difference in the risk of wound inflammation between suture types, regardless of whether the surgery was performed open (relative risk 2.28 [95% CI 0.24 to 21.91]; $I^2 = 90$ %) or endoscopically (relative risk 0.93 [95% CI 0.06 to 14.09]). There was no difference in hand function or scar satisfaction between suture types. No adverse events (e.g. infection or bleeding) were reported.

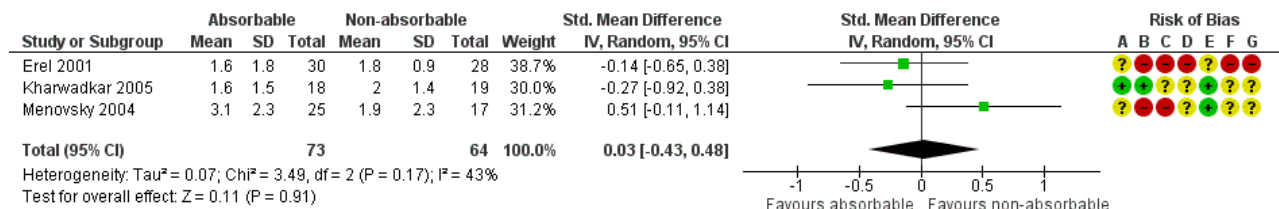
The NHS reference cost of a nurse appointment (to remove sutures) is £68-120³ and the risk of complications after CTD is very low⁴. Therefore, we suggest that if surgeons used absorbable sutures to close the skin after CTD and arranged no face-to-face follow-up, then the NHS could save over £5 million annually. Our Cochrane review recommends further non-inferiority randomised trials which might benefit patients and the health service alike.

References

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Figure Legends

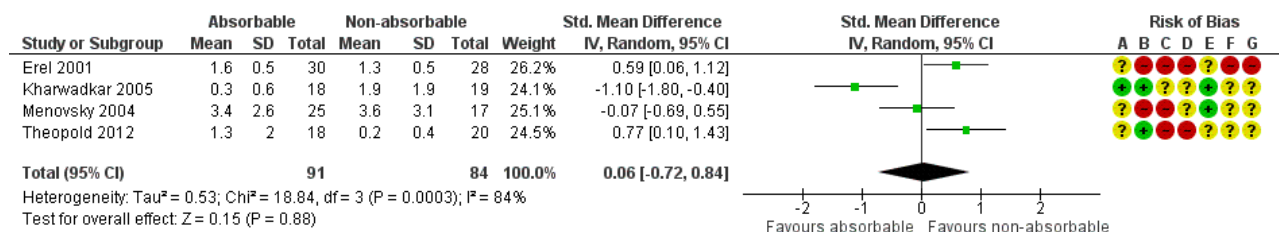
Figure 1. A forest plot of patient-reported pain 10 days following open CTD, showing no evidence of a difference between absorbable and non-absorbable sutures



Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure 2. A forest plot of patient-reported pain 6 weeks following open CTD, showing no evidence of a difference between absorbable and non-absorbable sutures



Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias