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Return to work recommendations after carpal tunnel release: A survey of UK hand surgeons and hand therapists

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Abstract

There is a limited evidence base from which to derive recommendations for safe and effective return to different types of occupation after carpal tunnel release surgery. The current practice of members of the British Society for Surgery of the Hand and the British Association of Hand Therapists was investigated with a questionnaire. In total, 173 surgeons and 137 therapists responded from an estimated sample of 1,277. Median recommended return to work times were 7 days for desk-based duties, 15 days for repetitive light manual duties and 30 days for heavy manual duties. However, the responses were wide-ranging: 0-30 days for desk-based; 1-56 days for repetitive light manual; and 1-90 days for heavy manual. Variation in the recommended timescales for return to work and other functional activities after carpal tunnel release suggests that patients are receiving different, possibly even conflicting, advice.

Level of evidence: V

Introduction

To date, there is a limited evidence base from which to advise patients when they should aim to return to work (RTW), or other activities, after carpal tunnel release (CTR). The Royal College of Surgeons' (RCS) patient guide "Helping you make a speedy recovery after carpal tunnel release" suggests timescales for return to different occupations, including: supervisory and managerial roles (7-14 days); light manual roles (14-28 days); heavy manual, rescue or custodial roles (42-70 days) (Royal College of Surgeons, 2014). However, it is not clear how these timescales were derived, or whether clinicians in the UK refer to this guidance when providing advice for patients.

There is evidence that RTW times vary widely, with mean post-operative work absence ranging from a few days to several months (Newington et al., 2015). The reasons for this variation appear to be complex and include both individual and work-related factors (Peters et al., 2016). The role of surgeon-recommended RTW times after CTR has been explored in one small study (Ratzon et al., 2006). It was found that patients did not always follow their surgeon's advice (6% returned 1 week earlier than recommended and 28% returned at least 1 week later); however, surgeons' recommendations were a strong predictor of delayed RTW, defined as >21 days (Odds ratio: 30.5; 95% CI 3.2 to 288).

The purpose of this study was to investigate the RTW recommendations of practising clinicians for patients undergoing CTR.

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Methods

This survey of practice was conducted among members of the British Society for Surgery of the Hand (BSSH), the Association of Surgeons in Primary Care, the Reconstructive Surgical Trials Network and the British Association of Hand Therapists (BAHT). Questionnaires were circulated electronically in November-December 2016. A reminder email was sent 10-14 days later. In addition, printed versions of the questionnaire were distributed at the 2016 BSSH/BAHT Autumn Scientific Meeting by LN and DW. Questionnaire content was developed in collaboration with clinicians specialising in hand surgery, hand therapy and occupational health, and was piloted with five practising hand surgeons and therapists. The final anonymous questionnaire asked respondents to answer in terms of their own clinical practice in the previous 12 months (Appendix A, available online). Approval was granted by the University of Southampton Faculty of Medicine Ethics Committee (20993) with the collaborative agreement of the clinical associations involved.

Statistical methods

Primary statistical analyses were descriptive. Data for recommended RTW times were not normally distributed and therefore the Wilcoxon rank-sum test was used to explore differences between the hand surgery and therapy groups. Statistical significance was set at the $p>0.05$ level. Responses to the open-ended question were categorised independently and agreed by two researchers (LN and KF).

Results

One hundred and seventy-three surgeons and 137 therapists completed the questionnaire. The estimated number of clinicians who were invited to participate was 1,277 surgeons and 682 therapists, yielding response rates of 13.5% and 20.1%, respectively. Thirty-eight clinicians were excluded from the final analysis because they had either not treated any CTR patients who were workers in the previous 12 months, or did not practise in the UK. The majority of surgical respondents (84%) were at consultant level; only eight surgeons were based in primary care. The majority of therapists were at senior and clinical specialist grades (68%) and were divided into occupational therapists (60%) and physiotherapists (40%). Sixty-eight percent of surgeons and 28% of therapists worked in private practice at least some of the time. The predominant CTR method was the mini open incision (77% of surgeons).

Return to work times

Respondents were asked to report the earliest time after CTR that they advised their patients to return to three different types of work: desk-based duties (e.g. keyboard, mouse, writing, telephone); repetitive light manual duties (e.g. driving, delivery, stacking); and heavy manual duties (e.g. construction). Recommended RTW times are shown in Table 1. For each of these work types, clinicians who reported treating more than 70 CTR patients in the previous 12 months (one to two patients per week) recommended earlier RTW times than those treating fewer patients.

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Return to work recommendations

One hundred and twenty-six surgeons (82%) and 94 therapists (80%) responded to an open question: *what do you recommend for patients returning to work after carpal tunnel release*? Wound healing was discussed by 39 surgeons (31%) and 31 therapists (33%) with advice to limit function to clean and/or dry activities until healed. Forty-three surgeons (34%) and 51 therapists (54%) advised avoiding activities that might aggravate the surgical site, such as heavy gripping or weight-bearing through the hand. The recommended duration over which these activities should be avoided ranged from 2-6 weeks. A smaller number of responders, 38 surgeons (30%) and 12 therapists (13%), gave advice about commuting to work. The suggested timescales for resuming driving ranged from the day of surgery to 6 weeks post-operatively. Fifty-three surgeons (42%) and 29 therapists (31%) reported that their advice was dependent on the patient's individual circumstances, although only seven surgeons and six therapists reported involving the patients' employers in the RTW decision-making.

Discussion

In this UK-based survey of 272 respondents, we found variation in the reported CTR patient pathways and RTW recommendations, despite the use of similar surgical procedures. Among respondents, the median recommended times for return to desk-based duties (7 days) and light manual duties (15 days) reflect the earliest time points suggested in the RCS patient guidance document (Royal College of Surgeons, 2014). However, the median recommended time for return to heavy manual duties suggested by our respondents was 30 days, some 12 days earlier than the RCS guideline. This may suggest that the guideline, the evidence for which is unknown, is over-cautious for this particular occupational group and that, in practice, few patients need these extra days. Even earlier return to manual work has been reported in an uncontrolled study of a nurse-led carpal tunnel service (Mallick et al., 2009). In this case series, 17% of the 191 manual workers returned to work within 1 day of surgery; 71% returned by 7 days and 91% within 2 weeks.

The only statistically significant difference between surgeons and therapists was found in the median recommended time to return to desk-based duties (surgeons, 7 days; therapists, 10 days). Suture removal usually takes place 10-14 days after CTR and it is possible that surgeons generally advise their patients to return to desk-based work with sutures in situ, whereas therapists wait until sutures are removed. However, there is currently no evidence suggesting whether or not there is a risk to the incision site from carrying out desk-based duties before the wound is fully healed.

For all three work categories, clinicians treating larger numbers of CTR patients (>70 per year) reported advising earlier RTW. We chose a cut-off point of >70 patients to enable a comparison of those treating one or two CTR patients every week with those treating CTR patients less frequently. It is possible that clinicians with greater experience of treating CTR patients may be confident that earlier RTW is not detrimental to recovery. However, we found wide variation in reported timescales, even among those treating higher numbers of patients. This implies that patients are receiving different, and possibly conflicting, advice about when to RTW even from clinicians experienced in treating CTR patients.

A key limitation of our study is the potential for non-response bias. However, although the response rate was low (14-20%), the variation identified among this group of engaged clinicians (members of professional societies and/or conference attendees) may suggest even greater heterogeneity among the wider population of surgeons and therapists. We acknowledge that the use of self-reported data may not be a true reflection of clinical practice and several steps were taken in an attempt to promote accurate reporting. The sampling frame was designed to capture clinicians regularly treating CTR patients, and these individuals were asked to think about their own practice, rather than answer hypothetically.

Overall, the content of clinician-reported RTW advice for CTR patients was similar, however the timescales for return to functional activities, such as driving, and for return to different occupational duties were wide-ranging. This suggests that patients are being given different advice about when it is safe for them to return to similar work roles. Furthermore, individual patients may be receiving conflicting RTW recommendations from different clinicians. Currently, there is limited evidence to better inform RTW advice and we are now conducting a multi-centre prospective study to establish whether earlier RTW after CTR is safe and effective, or whether longer periods of post-operative work absence are required for optimal surgical outcomes.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Recommended return to work times

		n	Recommended time (days)			*p*-value
			Median	IQR	>Range	
Desk-based duties	Surgeons	145	7	2-14	0-42	**0.02**
	Therapists	104	10	6-14	0-30	
	All	*249*	*7*	*3-14*		
Repetitive light manual duties	Surgeons	144	14	14-28	1-56	0.58
	Therapists	104	16	14-28	2-45	
	All	*248*	*15*	*14-28*		
Heavy manual duties	Surgeons	145	30	21-42	1-90	0.96
	Therapists	104	30	21-42	5-90	
	All	*249*	*30*	*21-42*		

IQR interquartile range