Scar Sensitivity Following Carpal Tunnel Decompression:

Can alteration in technique reduce the incidence of scar sensitivity?

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Aims

Scar sensitivity is a common complication following carpal tunnel decompression. Previous audit by the authors demonstrated a 6% incidence of scar sensitivity in 153 patients. It has been suggested that modification of operative technique can lessen the incidence of scar hypersensitivity[1]. We therefore adapted surgical techniques and reassessed outcomes following this intervention.

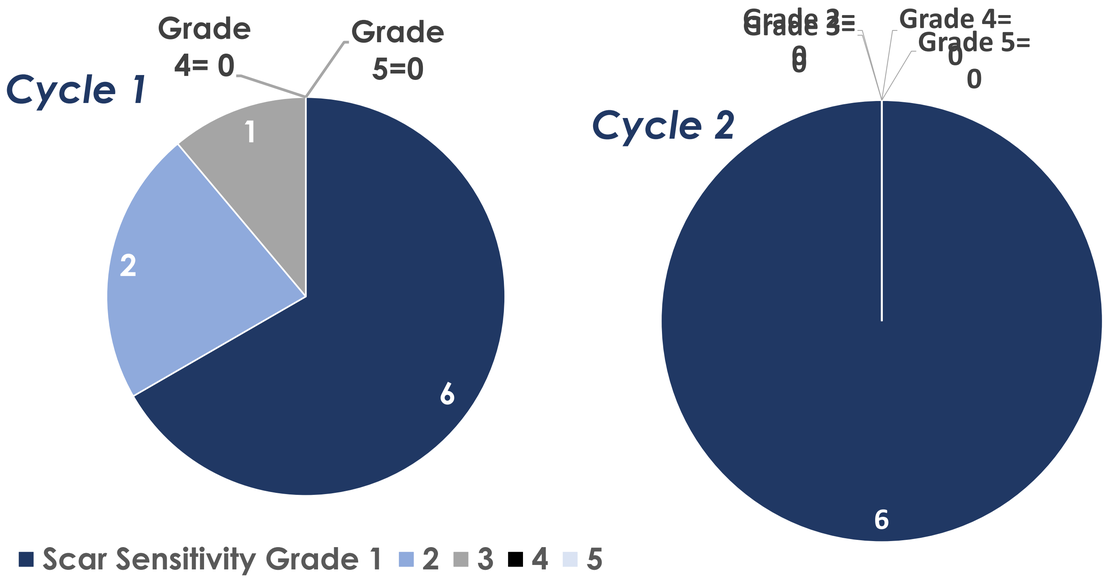
Method

207 decompressions performed over 3 years (1st Jan 2016-31st Dec 2019) were included.
The technique was modified:

- No use of diathermy to bleeding vessels
- Sutures limited to <5
- Gaps between sutures filled with tissue glue
- Tourniquet deflated after dressings

Patients reviewed at 6 weeks in outpatients were questioned on comfort of performing daily tasks, such as rising from a chair, driving, gripping the gear stick, and patients' perceptions on the sensitivity of the scar. Patients were asked to report their scar sensitivity on a graded scale of 1 (minimum) to 5 (maximum).

Scar Sensitivity by Grade:



Results

Hypersensitivity Grade (1= min, 5 = max)	No. of patients	
	Cycle 1	Cycle 2
None	144 (94%)	201 (97%)
1	6 (4%)	6 (3%)
2	2 (1%)	0
3	1 (1%)	0
4	0	0
5	0	0
Total	153	207

Overall, scar hypersensitivity was reported by 3% of patients. This is an improvement from previous audit, which showed 6% of patients having variable degrees of hypersensitivity.

All of the patients in this cohort with scar hypersensitivity reported grade 1 (minimal) sensitivity only. In previous audit prior to modification of technique a higher percentage of patients reported grade 1 hypersensitivity (4% vs 3%).

Several patients in the prior cohort also complained of grade 2 and 3 hypersensitivity (2%), whereas in this larger cohort, post modification of technique, this figure was 0%. No patients in either cohort complained of severe hypersensitivity.

Conclusion

Our data suggests that reducing the number of sutures, limiting diathermy use and deflating the tourniquet after dressings does reduce the incidence of scar hypersensitivity following decompression for carpal tunnel syndrome. Further study perhaps at multiple centers with higher patient numbers may be warranted.

[1] Ahcan U, Arnez ZM, Bajrovic F, Zorman P. *Surgical technique to reduce scar discomfort after carpal tunnel surgery.* J Hand Surg Am 2002; 27(5):821-7.