

## CORRELATION OF ELECTRODIAGNOSTIC STUDY AND INTRAOPERATIVE FINDINGS IN CARPAL TUNNEL SYNDROME - A RETROSPECTIVE STUDY

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### INTRODUCTION:

Carpal tunnel syndrome (CTS) is one of the most prevalent conditions impacting the hand. Numbness, pain, tingling, and weakness are the common symptoms of this condition. There are many causes as well as risk factors that contribute to this condition. CTS can be diagnosed clinically as well as with additional objective findings from the electrodiagnostic test.

### MATERIALS & METHODS:

Retrospective study, including 70 patients. They were given Boston questionnaire, preoperative and postoperative scoring at 1 month.

### RESULTS:

There is no correlation seen between the preoperative Boston questionnaire, and electrodiagnostic study, as well as electrodiagnostic study and intraoperative findings. However, the pre-functional Boston questionnaire was able to predict the post-operative symptom and functional scoring of the Boston questionnaire being 0.051 and 0.002 respectively at 95% confidence.

### Figure 1: CORRELATION BETWEEN PREOPERATIVE BOSTON QUESTIONNAIRE SCORES AND ELECTRODIAGNOSTIC STUDY IN CTS

Electrodiagnostic Grading	Total Pre.Sym	Total Pre.En	Total
Normal Mean	33	11	44
	1	1	1
Mild Mean	30.7	16.5	47.2
	14	14	14
Moderate Mean	34	17.2	51.2
	30	30	30
Severe Mean	29.48	16.28	45.76
	25	25	25
Total Mean	31.73	16.64	48.37
	70	70	70

### Figure 2: CORRELATION BETWEEN PREOPERATIVE BOSTON QUESTIONNAIRE SCORE AND INTRAOPERATIVE GRADING

Intraoperative	Total Boston Pre.Sy	Total Boston Pre.En	Total Boston Pre
Mild Mean	31.4	16.05	47.46
	63	63	63
Moderate Mean	35.17	23.33	58.50
	6	6	6
Severe Mean	31	14	45
	1	1	1
Total Mean	31.73	16.64	48.37
	70	70	70

### DISCUSSIONS:

This study was aimed to investigate the correlation between electrodiagnostic and intraoperative findings in CTS. We found that there was no correlation between the two variables. There was a very weak correlation between preoperative symptom score and close to weak correlation of the preoperative functional score with the electrodiagnostic study, whereby the electrodiagnostic study showed a more severe grade. The possible reason could be variable duration between the onset of symptoms and electrodiagnostic study. In terms of correlation between electrodiagnostic study and intraoperative findings, there was no significance found. The electrodiagnostic results showed a more severe grade than the intraoperative grading.

### CONCLUSION:

Boston questionnaire specifically the pre functional questions can be useful as a scoring tool to predict the severity as well as the outcome of patients post carpal tunnel release. The electrodiagnostic study that is commonly used is not reliable in grading the severity of the CTS as evidenced by a negative correlation with intraoperative findings. Hence, the electrodiagnostic study should be used as an adjunct to clinical diagnosis of CTS, not merely depend on its severity grading.

### REFERENCES

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