

Myofascial Pain Referral: Pattern Identification in Cervical Dysfunction

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Introduction

Evidence supports myofascial trigger points (MTrPs) as an important contributing factor in cervical dysfunction¹.

MTrP assessment is reliant on physical examination data, particularly manual palpation. However the validity of MTrP palpatory examination is poor².

Effectiveness of assessment may be improved by triangulating data with MTrP pain referral information obtained from the patient history. This information may direct and focus palpatory examination thereby improving diagnostic utility.

The correct identification of MTrP patterns is a prerequisite to effective triangulation.

Purpose

To determine MTrP pattern identification rates in a group of experienced post-registration musculoskeletal physiotherapists.

To explore participants' perceptions surrounding MTrP pattern identification.

Participants

A convenience sample (n=25) of experienced musculoskeletal physiotherapists were recruited from a cohort of post-registration MSc Advanced Manipulative students in the UK (mean qualification = 10yrs, mean musculoskeletal experience = 8yrs).

Ethical approval was obtained from the University of Birmingham (September 2008).

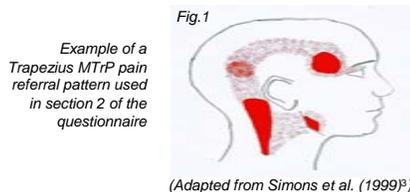
Methods

A questionnaire-based descriptive survey was undertaken using mixed-methods. The questionnaire was piloted by four physiotherapists (mean experience = 13yrs). The final version included both open and closed questions and consisted of three sections.

Section 1 requested demographic data.

Section 2 investigated the participant's ability to identify six MTrP and, for comparative purposes, six cervical nerve root pain referral patterns (an example is presented in Fig. 1).

Section 3 explored participants' perceptions using open and closed questions.



Analysis

Descriptive analysis compared the mean number of correct answers in the MTrP and cervical nerve root pattern identification tasks. Differences were explored using a related t-test.

Qualitative data were analysed independently by the lead author and a research assistant using thematic analysis (following a bracketing process). Rigor was ensured through triangulation and member checking.

Results

The MTrP pattern identification mean of 1.40 (95% CI=0.87 to 1.93) was significantly ($p<.05$) lower than the cervical nerve root mean of 3.88 (95% CI=3.19 to 4.57). Overall identification rates were 23% and 65% respectively (individual rates are presented in Fig. 2).

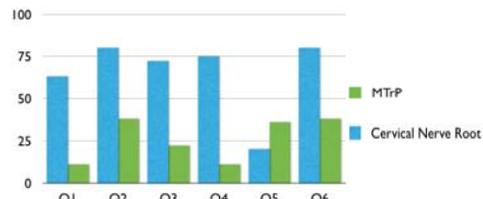


Fig. 2 Percentage of correct answers in the pattern identification section of the questionnaire

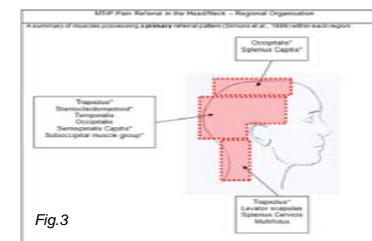
Qualitative analysis revealed a number of themes suggesting reasons for the low MTrP pattern identification rate. These themes are summarised in Table 1.

Identified Themes	Examples of Participant Quotes
1) Lack of Knowledge a) Teaching Bias	"Physio training tends to be biased towards nerve root patterns instead of myofascial."
b) Knowledge Deficit	"Less knowledge of myofascial referral patterns."
2) Clinical Experience	"I feel we use nerve root referral patterns more than myofascial referral patterns."
3) Clinical Recall	"There are so many pain referral patterns that I cannot remember them..."
4) Clinical Relevance	"myofascial trigger points are not as well understood/ evidenced. There is more controversy about their use... perceived as less relevant."

Table 1. Summary of final themes following qualitative data analysis

Discussion & Conclusions

The concept of using data triangulation to increase effectiveness of palpatory MTrP assessment remains problematic. As this preliminary study suggests, MTrP pattern identification in experienced post-registration musculoskeletal physiotherapists is poor.



Recommendations

Future development of under/postgraduate education, aimed at developing an organised knowledge-base is necessary to improve MTrP pattern identification. Methods such as 'regional organisation' (Fig. 3) may be employed to facilitate this development.

References

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