

Comparison of Metacarpal-phalangeal Joint (MCPJ) Flexion Blocking Splint vs. Oval 8 Proximal-interphalangeal Joint (PIPJ) Flexion Blocking Splint in Conservative Management of Trigger Finger

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Problem

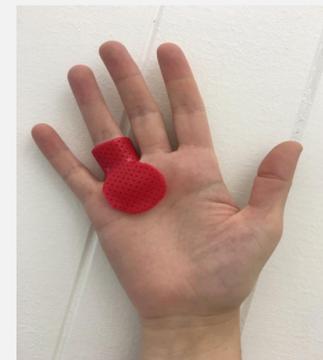
Trigger finger is a common finger condition with a lifetime risk of 2-3% and up to 10% in diabetics. It is generally considered that splinting is an appropriate treatment option in patients who refuse or wish to avoid corticosteroid injection, and there are a variety of splints which can be effective in reducing symptoms. Our clinic has traditionally utilized custom fabricated volar MCPJ blocking splints to limit flexor tendon excursion and reduce or eliminate triggering. There is evidence supporting use of PIPJ blocking splints which can be custom cylindrical splints or prefabricated Oval-8 splints worn to block PIP motion. Lunsford et.al. (JHT 2017) performed a systematic review of conservative management of trigger finger where all authors noted similar results regardless of the joint immobilized. An Oval-8 splint can be fitted in under a minute whereas a MCPJ blocking splint takes time to fabricate and may be more functionally limiting for the patient.

Goal

We propose both fabricating a MCPJ blocking splint *and* issuing an Oval 8 splint and allow patients to use both at their discretion. We will follow up with patients regarding their preference and effectiveness of the splints. This may allow us to understand which, if either, splint is preferred and effective for patients.

Intervention Design

MCPJ blocking splint



Oval 8 PIP blocking splint



We intend to provide two different splints to patients referred to OT hand therapy with diagnosis of trigger finger, regardless of injection status.

All patients will fill out a QuickDASH outcomes questionnaire at their clinical visit and report an initial pain score.

We will follow up with all patients who received splints via phone at 6 weeks to 3 months post visit beginning with patients seen as of Q1 2022.

We will employ a short questionnaire to determine the following:
Which type of splint they preferred
Likert satisfaction scale (1-5) for each splint
Post intervention pain rating
Repeat QuickDASH score.

Results to Date

N=18	All sub-jects	Oval 8 only	MCPJ splint only	Both	Pre-Inter-vention Mean score	Post Inter-vention Mean score
Quick Dash Chng (mean)	15	x	x	x	37	22
Pain Score chng	3.2	x	x	x	5.5	2.3
Likert Satis-faction scale	1.9	1.7	3.0	1.7	x	x
Patient splint prefer-ence	x	72%	28%	x	x	x

Overall, trigger splint intervention resulted in a average improvement in DASH scores across all subjects of 15, exceeding he minimal clinical difference standard of 11.

There was a high level of satisfaction with our splinting intervention across all subjects and for those using both splints. **Satisfaction was significantly lower among those using MCPJ blocking splint only.**

Nearly 3/4ths of subjects expressed a preference for the Oval-8 splint.

Conclusions/Next Steps

Oval 8 splint satisfaction, effectiveness, and pain relief are all equal, or superior to, use of the MCPJ blocking splint.

Based on this data, the pre-fabricated Oval 8 splint appears to be a suitable alternative to the traditional paddle splint, and may in fact be preferable as the standard splinting approach to trigger finger conservative management.

The paddle splint may still be an effective intervention, but should always be coupled with provision of an Oval 8 given poor satisfaction rating when used alone.

It would reasonable to continue data collection for the next fiscal year to increase our subjects and strengthen validity and power of the results we have noted.

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