

## MINIMIZING PAIN EXPERIENCE IN TRIGGER FINGER STEROID INJECTION

Chuah Sion Keat<sup>1</sup>, Shalimar Abdullah<sup>1</sup>, Jamari Sapuan<sup>1</sup>

<sup>1</sup>Universiti Kebangsaan Malaysia Medical Centre

**Introduction:** Steroid injection is a well-established, effective initial treatment for trigger finger. However, it involves a painful needle-pricking in the sensitive palmar region that may cause future injection avoidance.[1] In this study, we investigated if the usage of finer needle gauge has a clinically significant impact on pain experience in trigger finger steroid injection. The effects of injection duration, pre-injection anxiety and needle phobia on pain experiences were also analyzed.

**Methodology:** One hundred patients scheduled for trigger finger steroid injection between February 2019 to July 2019, were randomized into a control group (23G needle) and an intervention group (26G needle). Total of 2 mls of solution (consisting of 1 ml 2% lignocaine hydrochloride [20mg] and 1 ml triamcinolone acetonide [40mg]) were injected. The expected pain scores for needle injection, anxiety scores, and injection phobia scale-anxiety were graded before injection. After the procedure, the pain scores upon needle insertion, during injection and 1-minute after injection were recorded. Injection duration was also recorded.

**Discussion:** The 26G needle was significant less painful compared to 23G needle both at needle insertion and during injection. Injection duration of the solution was longer by using the 26G needle (mean=7.23s [ $\pm$ 1.00s]) as compared to 23G needle (mean=4.86s [ $\pm$ 0.94s]) with a significant negative correlation to pain during injection. There were positive correlations between the pain experienced at needle insertion with the pre-injection anxiety level and injection phobia scale-anxiety in anticipation of another trigger finger steroid injection ( $r=0.335$ ,  $p<0.001$  and  $r=0.470$ ,  $p<0.001$  respectively).

**Conclusion:** Pain experienced in trigger finger steroid injection can be minimized significantly by using 26 gauge needle as compared to 23 gauge needle.