



**Service Priorities and Programmes
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The Effectiveness of Extracorporeal Shock Wave Therapy (ESWT) in the Management of Trigger Finger

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Introduction

Trigger finger is one of the most typical cumulative trauma disorders of fingers. Increasing prevalence of this condition is possibly due to the popularization of electronic devices in recent decades. ESWT is an increasingly popular treatment used by physiotherapists to manage trigger finger. However, the effectiveness and treatment protocol of ESWT in managing trigger finger has not been systematically investigated.

Objectives

To compare the effectiveness of ESWT with conventional physiotherapy treatment in patients with trigger finger

Methodology

Thirty patients (male=9, female= 21, mean age= 58.2 years) diagnosed with grade II or III trigger finger were randomly assigned to receive either conventional physiotherapy treatment (CT) (n=15) or ESWT (n=15) for six weeks. The CT group received heat treatment, electrical modalities for soft tissue healing, tendon gliding and stretching exercise twice a week while the ESWT group received 1000 impulses of ESWT and stretching exercise once a week. Outcome measures including pain level (Numeric Pain Rating Scale, NPRS), handgrip and pinch strength, number of triggering events, upper extremity function (The Disabilities of the Arm, Shoulder and Hand Questionnaire, DASH) and, patients' perceived satisfaction (Numeric Global Rating of Change Scale, NGRCS) were measured before treatment, at 2 weeks, 4 weeks and 6 weeks upon discharge. Two-way analysis of variance with repeated measures was done to compare the effect of ESWT and CT on all outcome measures assessed.

Result

The demographic characteristics and all baseline assessments of the two groups were comparable ($p=0.34$). Both groups demonstrated significant improvement in all outcome measures after treatment ($p=0.001$). For all outcome measures, substantial improvement was showed in NPRS (CT: -59%; ESWT: -61%), NGRCS (CT: 60%; ESWT: 61%), grip strength (CT: 52%; ESWT: 75%), pinch strength (CT: 69%, ESWT:

83%), reduction in triggering events (CT: -30%; ESWT: -54%) and DASH score (CT: -57%; ESWT: -34.0%) after 6 weeks. However, no significant difference was found in all outcome measures between the two studying groups (all $p > 0.05$) except for upper extremity function ($p = 0.004$). This study demonstrated both ESWT and conventional physiotherapy treatment were effective and grossly comparable in the management of trigger finger. ESWT (6 sessions) appeared to be more efficacious than conventional physiotherapy intervention (12 sessions) in terms of patients' attendance and treatment duration.