Service Priorities and Programmes

Electronic Presentations

Convention ID: 413
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Effect of Shock wave therapy on patients with trigger finger: The preliminary results

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Keywords:
Shock wave therapy
Trigger finger

Introduction

Trigger finger (also referred to as stenosing tenosynovitis) is a common disorder. It is characterized by catching, snapping or locking of the involved finger flexor tendons, associated with dysfunction and pain (Makkouk, Oetgen, Swigart & Dodds, 2008). The main hypothesis is stenosing tenosynovitis at the level of the first annular (A1) pulley (Sampson, Badalamente, Hurst & Seidman, 1991). Non-invasive management is often considered before corticosteroid injection or surgery. A relatively new non-invasive treatment option is Extracorporeal shock wave therapy (ESWL). To date, no reported studies have investigated the effectiveness of ESWT for the treatment of trigger finger. Neither has anyone use ultrasound imaging to study the treatment of shock wave on trigger finger.

Objectives

Effect of Shock wave therapy on patients with trigger finger: The preliminary results Introduction Trigger finger (also referred to as stenosing tenosynovitis) is a common disorder. It is characterized by catching, snapping or locking of the involved finger flexor tendons, associated with dysfunction and pain (Makkouk, Oetgen, Swigart & Dodds, 2008). The main hypothesis is stenosing tenosynovitis at the level of the first annular (A1) pulley (Sampson, Badalamente, Hurst & Seidman, 1991). Non-invasive management is often considered before corticosteroid injection or surgery. A relatively new non-invasive treatment option is Extracorporeal shock wave therapy (ESWL). To date, no reported studies have investigated the effectiveness of ESWT for the treatment of trigger finger. Neither has anyone use ultrasound imaging to study the treatment of shock wave on trigger finger. Therefore the objectives of this study were: (1) to evaluate the effect of focused shock wave therapy (at low intensity energy [<0.1 mJ/mm2]) on patients with trigger finger and (2) to analyze the sonographic characteristics of trigger finger with shock wave therapy.

Methodology

Target cases were patients with idiopathic trigger fingers attending the Specialist Out-patient clinic in Queen Mary Hospital. A pre-treatment assessment was carried out to identify the grading of trigger finger, the pain level, the tenderness level, range

and grip strength of the affected digit. Real time ultrasound measurement was also performed. Post treatment evaluation was carried out on the same parameters after a course of ESWL.

Result

As at December 2015, 16 patients had completed the treatment. Three (19%) were males and thirteen (81%) were females. The mean age was 67.2 (+/- 12.2). The mean duration of symptoms was 7.9 months and 44% fell into Grade III triggering. Wilcoxon Signed Rank test showed significant decrease in their morning pain ($p<.05$), tenderness ($p<.05$) and thickness of A1 pulley ($p<.05$) after shockwave therapy. In average, there was a 64% subjective improvement in the subjects. The preliminary results suggested that shockwave therapy is effective in improving pain and tenderness on patients with TF.