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A Systematic Review Into The Evidence Based Practice Of Therapeutic Ultrasound In Treating Soft Tissue Injuries.

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Introduction

Therapeutic Ultrasound, a form of electrotherapy, has been used extensively in clinical practice for many years (Warden 2002). Roebroeck (1998) stated it is essential to insure a correspondence between theory and practice. This study will systematically review this correspondence in the field of therapeutic ultrasound in treating soft tissue injuries. The "theory" in this review will be the results achieved by RCTs in the area and the "practice" will be the results from surveys into the usage of therapeutic ultrasound in clinical settings.

The Health Council of the Netherlands reported the most conclusive criticism of the current usage of ultrasound as a treatment modality in 1999, which stated, "Widespread use in mainstream care is not justified." This review aims to establish whether the use of therapeutic ultrasound is not supported by conclusive scientific evidence or whether the evidence is not be implemented in clinical settings.

Method

In order to carry out a review of existing research a search of primary studies will be carried out. This will be facilitated through online searches of PubMed (www.pubmed.gov) and The Cochrane Library, www.cochrane.org). These two journal databases are to be used following recommendations by Pai (2004).

Keyword Searches were: therapeutic ultrasound; ultrasound and soft tissue; and ultrasound treatment and soft tissue for RCT's, ultrasound clinical usage; the use of ultrasound physiotherapists; use of electrotherapy physiotherapists for clinical usage studies

Summary Of Results

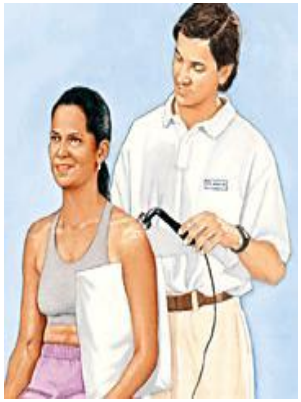
Study	Injury Investigated	Injury Stage
Ebenbichler 1998	Carpal Tunnel Syndrome	More than 3 months
Nykänen 1995	Painful Shoulder	At least 2 months
Gürsel 2004	Soft Tissue Disorders of the Shoulder	At least 4 weeks
van der Heijden et al 1999	Soft Tissue Shoulder Disorder	At Least 2 weeks.
Binder 1985	Lateral epicondylitis	At least 1 month
D'Vaz 2005	Lateral epicondylitis	More then 6 weeks
Lundeberg 1988	Epicondylalgia	At least 1 month.

Study	Injury areas	Reason for use	Region of Application
ter Haar 1987	Strained tendons, tenosynovitis	No details	No details
Warden 2002	Acute- Ligaments Chronic- Muscles	Chronic= increase tissue blood flow Acute= decrease inflammation	Ankles and knees
Chipchase 2003	Placebo effect Chronic scar tissue Chronic Muscle tears	Tissue healing, thermal properties and placebo effect.	No details

Ultrasound application and treatment details were also recorded, as was any information on the calibration of devices.

Conclusions

The review concludes that the extensive use of therapeutic ultrasound in clinical practice is not supported by evidence that is ranked highly in the hierarchy of evidence e.g. randomised controlled trials. However, there were limitations in the study's inclusion of articles and recommendations for further research are made.



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