Physiotherapy in headache management

The best way forward?

An overview of the knowledge and clinical expertise gained in the module HEM 24 Practice Development through Independent Learning 2011 through the University of Brighton Faculty of Health.

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I wonder which are the best options?

Can you do anything about my headache?

Physiotherapy

Acupuncture

Relaxation classes

Eye test

Aspirin

Triptans
Confusions

- Different understandings of terms such as ‘Cervicogenic’ and ‘primary’ and new categories which the International Classification of Headaches (ICH) attempts to keep pace with (International Headache Society 2008)

- Whether or not to classify types of migraines and tension headaches separately

- How to treat headaches which have symptoms from more than one category

- National Institute for Clinical Excellence guidelines aims to advise general practitioners on the best therapy but has inconsistencies (www.sign.ac.uk)
The role of the cervical spine is poorly understood

- 'The contribution of cervical spine disorders to migraine and tension-type headache is poorly understood' and estimates the contribution of CGH of chronic headaches to be 14-18%.

- Yet 'cervical spine' is a key word in only 2.3% of migraine therapy literature and only 6.6% of chronic headache therapy in general.

International Headache Society 2008)
Quality of Randomized Controlled Trials of physical treatments for headaches

Systemic reviews of trials

- The quality of methodology of trials used were found to be typically low with lack of descriptions of procedures used and lack of appropriate rationale.
- Results generally confusing and inconclusive.

(Fernández-de-las-Peñas et al., 2006)

Physiotherapist run trials

- Some trials were well designed with suitable methodology and emphasis on suitably trained therapists carrying out the appropriate treatments.
- Results can demonstrate clear benefits.

(Van Ettekoven and Luca, 2006)
The TCN and cervical spine connection

• The TCN is at the convergence between trigeminal afferents and afferents from the upper three cervical spinal nerves.

• The possible sources of cervicogenic headache lie in the structures innervated by the C1 to C3 spinal nerves.

• This includes the upper cervical synovial joints and associated structures.

• Experiments in normal volunteers have established that the cervical muscles and joints can be sources of headache.

(Bogduk, 2001)
Back to basics: Pain is an unpleasant sensory perception.

The sensory nerve of the head is the trigeminal nerve which arises from the trigeminocervical nucleus in the brain (TCN).
Factors converging to cause a headache

Non-Headache Zone:
- Incorrect use of analgesic medication
- Toxins in blood
- Unstable hormone levels

Headache Zone:
- Eye strain
- C0-C3 Joint Stress
- Genetic Predisposition

Serotonin Protective Cushion
Physiotherapy can relieve C0-C3 stress

Deep muscles which work together in the control of head position

Mobilising these joints reduces afferent impulses to the TCN

(Bogduk, 2001)
The way forward

- A pragmatic approach to the management of headaches would be to:
  a. Build on the best practice achieved by physiotherapy
  b. Appropriate medication use alongside physiotherapy

- The Convergence Hypothesis provides a sound basis for a useful model to work from as it can encompass the rationale behind the causes and treatments of all Primary Headaches
References

• VAN ETTEKOVEN, H. & LUCAS, C. 2006. Efficacy of physiotherapy including a craniocervical training programme for tension-type headache; a randomized clinical trial. *Cephalalgia, 26*, 983-91.