

# The mind/body physiological link & WRULD

*Precise of talk given to Radiology & Occupational Health Staff, Heartlands Hospital, Birmingham 2/11/01 by Dr. Graham Brown, Musculo-skeletal physician, Royal Orthopaedic Hospital, Birmingham.*

## **PAIN**

Pain can be classified in three ways and we react to each in a different way.

- Acute eg. A burn- withdrawal of burnt area from heat.
- Slow tissue damage- which ensues as a result of the burn over the following hours/days.
- Neurogenic/pathogenic pain eg. Pain that ensues when near to a flame but without being burnt.

Neurogenic pain may seem to be without cause as there is no obvious reason for it. However when we consider the musculo-skeletal system this becomes clearer. Over time stresses on muscles can produce pain that is caused by eccentric loading, this may cause mild pain which goes away when the affected muscle is rested. If the overloading continues on a daily basis the pain messages may eventually activate a trigger point which then opens a PAIN GATE. This is a poorly understood mechanism, that is intended to protect the body from harm. However when this happens as a result of normal as opposed to abnormal (eg. Weekend gardening) activity the trigger is activated regularly and sends neurogenic/pathogenic signals to the autonomic system resulting in referred pain and numerous other symptoms with no obvious cause on examination.

## **STRESS**

We are all familiar with stress whether at work or home and mostly we learn to deal with it on a short term basis. However if emotional stress is superimposed on the physical stresses previously described then symptoms will be exacerbated. The body starts to react adversely, with symptoms that eventually will prevent normal activities without intervention.

## **COPING with PAIN & STRESS**

The human body was never designed to sit for long periods or to hold limbs and spine in positions that require eccentric loading of the muscles. There is therefore no one solution to these problems.

- Stretching exercises such as in Pilates and aerobic exercise to improve stamina will help the body to cope.
- Ergonomic solutions to bad working practice.
- Reduce stress levels by managing workloads more effectively.

## **ACUPUNCTURE**

Acupuncture to release tension at the trigger points that open the pain gates can relieve symptoms of pain in up to 80% of patients provided there is timely intervention. This must of course be performed by an expert who understands musculo-skeletal problems but should be effective after 3-4 treatments and can be topped up as and when required.

## **SONOGRAPHERS**

Sonographers maintain postures that eccentrically load specific groups of muscles in order to perform all ultrasound examinations. ALL sonographers are therefore at risk of WRULD.

The exponential increase in the ultrasound workload, over the last few years have increased stress levels amongst ALL sonographers. We all cope with stress in different ways some better than others. But consider this if every day sonographers take few breaks, have long queues of irate patients (usually obstetric) then stress levels increase for all. Throw in the odd fetal abnormality, no FH and the worry of a sick family member and stress becomes all consuming, which then exacerbates the pain cycle. BEWARE YOU COULD BE THE NEXT TO SUFFER, learn to manage your body and your workload before permanent damage is done.