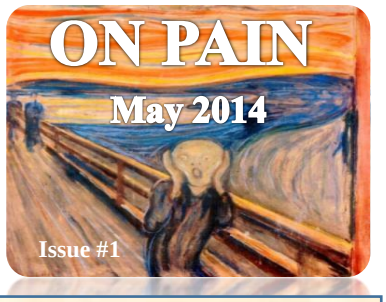
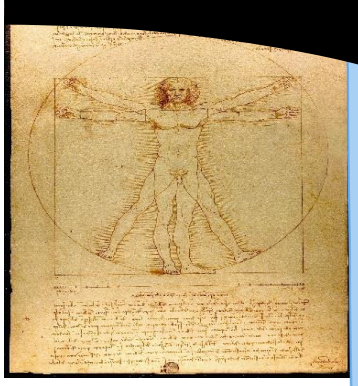
NEURO-MORPHISM.COM Newsletter

Image courtesy of Renjith Krishnan / FreeDigitalPhotos.net





www.neuro-morphism.com

PHYSIOTHERAPY

THE PAIN AND MOVEMENT REASONING MODEL

Jones and O'Shaughnessy recently published an article where they proposed an integrative model for the assessment of pain based on the Neuromatrix Theory of Pain (Melzack) and neuroplasticity. Their model combines the physiological, emotional, cognitive and social inputs in the neurophysiological process. In order to integrate these aspects, they propose a triangular structure of three categories: central, regional and local factors, which have to be addressed and explored in order to diagnose and implement treatment. The central category is integrated by the predisposing factors in the patient (general health, past painful experiences, and gene expression), the prolonged noxious stimuli, and the emotional, cognitive, and social states. This category, for instance, can give information on how sensitivity is being modulated, and can re-direct treatment towards psycho-neuro-immunological retraining approaches. The regional category includes bio-mechanics, patho-neurodynamics, and referred pain giving information on where connective tissue, joints or muscles are altered, guiding manual therapy and exercises regionally. Lastly, the local category comprises the chemical sequalae associated with tissue damage, and mechanical deformation, hence, treatment could be directed towards managing inflammation, rectifying tissue alterations, and addressing local mechanical influences. Lester E. Jones and Desmond F.P. O'Shaughnessy (2014). The Pain and Movement Reasoning Model: Introduction to a simple tool for integrated pain assessment. *Manual Therapy* xxx. p.p. 1-7.

Read more at Thinking Physiotherapy blog

NEUROSCIENCE

GLIA IN NEUROPATHIC PAIN RESEARCH

In the last decade, the new understanding of the role played by neural plasticity and glial cells over sensitization in chronic pain conditions has prompted a huge wave of research. Up to date, numerous studies have shown the critical role of glia in neuropathic and inflammatory pain due to glia's interrelationship with neurons. Glia can communicate with neurons by "listening" and "talking" to them (Ji R.R. et al., 2013). Thus, "nerve injury-induced chronic pain is associated not only with neuropathy but with *gliopathy*" (Ji R.R. et al., 2013, S20). It is increasingly being accepted that chronic pain can manifest not only by neural plasticity but by dysfunction of glial cells. This new understanding can lead to non-symptomatic therapy intervention for "gliopathy," however, as the article affirms, it is still not clear what type of drugs could be designed because it is difficult to target only glial cells without affecting neurons, and to eliminate glia cells with glia-selective toxins could cause adverse effects due to their supportive and protective roles. Theoretically, as the authors explain, it should be more effective for pain relief to target both neurons and glia; recent studies have shown that lipid mediators not only inhibit glial activation and inflammation but also TRP (Transient Receptor Potential) channels and reverse synaptic plasticity in neurons. As they propose, these endogenous lipid mediators could be developed for preventing and treating chronic pain, via targeting both neuronal and non-neuronal mechanisms. Ru-Rong Ji, et al. (2013). Glia and pain: Is chronic pain a gliopathy? *PAIN* 154 S10–S28.

Read more at NeuroSofia blog

MEDICAL ETHICS

WHAT IS THE PURPOSE OF PROLONGING LIFE IN PAINFUL TERMINAL DISEASES?

Let us examine the problem from the point of view of an anthropological rational ethics (ARE). By *ARE*, we mean a discourse whose statements are not contradictory among themselves, and which follow a non-transcendental valuation of life. An anthropological axiology would include, among others, the *principle of life preservation* and the *principle of primacy of the public interest*: the life of the group has preference over the life of the individual.

Our question can be analyzed with the aid of these two principles plus the logical one of non-contradiction. We can imagine, at least, the following scenarios for a dying patient in pain:

A. The patient is sustained by public funds. There are two possibilities:

a. Society denies further sustenance for it is an incurable disease and cannot benefit from the situation. It is a case of ARE.

b. Society agrees to sustain the patient despite the non-economic benefits of the situation.

b.1. Society wants the person to live longer in pain, for particular religious or ethical motives. It is not a case of ARE: the group does not obtain any economic benefit by its implementation.

b.2. Society wants the person to live longer but not in pain. If pain cannot be avoided, the only ARE solution is the shortening of the experience of suffering by assisted death.

b.3. Society leaves the choice to the individual. The ARE choice for the patient is assisted death.

B. The patient is economically self-sustained.

a. Still, society wants to exercise the control.

a.1.Society wants the individual to suffer. Equivalent case to A.b.1.

a.2. Society wants the individual to live longer but not to suffer. Equivalent case to A.b.2.

b. Society declares the case to be a private choice. Equivalent to A.b.3.

Therefore, the prolongation of life in terminal diseases can only be sustained on metaphysical grounds and not in terms of an anthropological rational ethics.

Read more at EthoMedical blog

Events

PHYSIOTHERAPY UK 2014
Birmingham's International Conference Centre on 10-11 October.
www.physiotherapyuk.org.uk

"The prolongation of life in terminal diseases can only be sustained on metaphysical grounds and not in terms of an anthropological rational ethics"

Neuro Quotations

"We should bear with patience the complaints of those in pain"
Hippocrates of Cos