

Phyllis Berger on

## Pain Management – Focus on 'Pain in Women'

### Reviewers 2008

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- Maart, Soraya
- Mbambo, Nonceba
- M'Kumbuzi, Vyvienne
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- Myezwa, Hellen
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**P**ain and more specifically chronic pain is neither well understood nor well managed in all the relevant health-care professions. Curiously, in life-threatening acute injury there is often a transient interval of painlessness followed by pain and even hyperalgesia.<sup>1</sup> In most individuals, the pain of acute injury subsides quickly and healing occurs within weeks, but for some healing does not lead to the expected reduction in pain.<sup>1</sup> Why do 'more or less' similar patients with 'more or less' similar diagnoses, given 'more or less' similar treatments, manifest radically different effects?<sup>2</sup>

This is not unexpected due to several factors. Pain is like a personal signature – unique to the individual – we can neither experience nor imagine another's pain and it is defined by the World Health Organisation (2007)<sup>3</sup> as "an unpleasant sensory or emotional experience associated with actual or potential tissue damage, or described in terms of such damage". Chronic pain patients often perceive persistent pain as a threat and a mismatch occurs between what the patient expects and what actually happens. These patients may develop pain related fear – fear of pain, re-injury and physical activity and accumulating evidence now demonstrates that these misinterpretations and the associated pain-related fear often cause a cascade of psychological and physiological events including hypervigilance, muscular reactivity, escape/avoidance and guarding behaviours that can perpetuate pain problems.<sup>1</sup> Changes may occur in the central and peripheral nervous system that create aberrations in nerve

conductance leading to hyperaesthesia, allodynia and hyperalgesia and both the accepted normal pharmacological and non-pharmacological approaches to treatment may either have no effect or may even exacerbate the situation.

Pain is therefore complex to understand and to treat in the context of the individual patient, the condition and the psychological and social milieu that may be present. Physiotherapists meet pain daily. It is important to progress our knowledge of pain mechanisms and the biopsychosocial effects that pain imposes on the psyche of our patients. Pain begets pain – if neuropathic pain exists and our treatment increases this type of pain, then the condition worsens. How best can we intervene for the benefit of our patients? Educating, encouraging and training patients will facilitate the placebo effect.

How can the 'placebo effect' influence our treatment? A variety of psychological, biochemical and neuroanatomical mechanisms associated with placebo responses have been identified. The psychological processes mediating placebo analgesia are those of conditioning and expectancy and the neurobiological studies have focused on the endogenous opioid system, the effects of which are fully or partially reversed by naloxone. Other non-opioid mechanisms and systems (such as serotonin, hormone secretion and immune responses) are also involved. However in the nocebo effect, 'anxiety can be turned into pain' and nocebo effects have been found to be mediated predominantly by cholecystokinin. It has also been established that nocebo suggestions of increased

pain evoke concurrent hyperalgesia and mobilisation of the hypothalamic-pituitary-adrenal responses.<sup>4</sup> Physiotherapists must therefore avoid any reference to nocebo statements and all interaction with patients should have a positive inference.

*It may not have been evident previously, that chronic pain affects a higher proportion of women than men around the world, and unfortunately women are also less likely to receive treatment compared to men. This is due to various factors, including societal and cultural norms, economic and governmental barriers.<sup>5</sup>*

The subject and the plight of pain in women has been adopted by the International Association for the Study of Pain's Global Year dedicated to Pain in Women which is a yearlong event commencing on 15 October 2007.

Through this campaign, IASP hopes to provide a voice to these women by drawing attention to this often neglected global issue as a first step towards reducing pain and suffering for women around the world.

*Chronic pain has a significant impact on women and it is necessary to raise awareness of pain conditions predominantly affecting women and to help both women and healthcare providers recognize the signs and symptoms. It is also important to recognise the disparities between female/male pain issues with regards to symptom presentation and access to treatment. It is intended that the effects of under-diagnosis and under-treatment will be addressed by increasing female-specific research and the development of new female-specific treatment options. Certain pain conditions commonly affecting women often do not receive adequate attention as historically medical research has relied heavily on male populations and conditions affecting them. The result of this male-centric research approach is that women continue to be treated based on studies in which they may not have been adequately represented.*

*Research has shown that women generally experience more recurrent pain, more severe pain and longer lasting pain than men. Chronic pain conditions which affect women more*

*than men include fibromyalgia, irritable bowel syndrome (IBS), rheumatoid arthritis, osteoarthritis, temporomandibular joint disorder (i.e., TMJ) and migraine headache. Included in chronic pain in women are the unique pain syndromes of a gynaecological nature such as pregnancy, childbirth and chronic pelvic pain (endometriosis, adhesions) with reference specifically to opportunistic infectious processes and cancers of the pelvis and genitourinary tract. The non-gynaecological causes of chronic pelvic pain may be irritable bowel syndrome, bladder-related, musculoskeletal or neuropathic.*

*Throughout the world, women (15 years or older) represent the largest percentage of newly infected HIV individuals. In sub-Saharan Africa, 59% of people living with HIV are women; for every 10 adult men living with HIV, 14 women are infected. Pain in HIV/AIDS is highly prevalent, diverse and varied in syndromal presentation and is associated with significant psychological and functional morbidity. These pain syndromes may be related directly to HIV infection or immunosuppression, HIV therapies and those unrelated to AIDS or AIDS therapies and include peripheral neuropathy, extensive Kaposi's sarcoma, headache, oral, pharyngeal, abdominal and chest pain, arthralgias, myalgias, and painful dermatologic conditions.*

*Women appear to experience pain differently than men, although the reason is not entirely understood. It is believed that this difference is due to numerous biological reasons including genetic, hormonal and pharmacological factors/influences. Studies suggest that hormonal variants and anatomical differences in the brain may explain this difference and these factors include stress-induced analgesia (i.e. the body's natural pain relief produced in response to stress) becoming suppressed by the sex hormone estrogen, changes in sex hormones moderating pain (e.g. menstrual cycle, pregnancy), structural differences within the brain determining how pain is processed as biologically women react to pain stimuli at a lower threshold than men. According to some studies, gender differences in pain*

*prevalence appear to attenuate after the reproductive years.*

*Women are more likely than men to experience multiple pains simultaneously. Having multiple pain conditions is associated with higher levels of disability and psychological distress than having a single pain condition, and having multiple pains is a risk factor for the onset of new pain conditions.*

*In addition, psychosocial and cultural disease factors/influences play an important role in how women experience pain. Women across cultures and around the world have lifetime incidence rates of major depressive disorders twice those of men and depression appears to be a risk factor for common pain conditions; similarly, women experience more physical conditions than do men, and the presence of such co-morbidities is hypothesized to be a risk factor for pain.*

*Access to healthcare services, particularly in poverty stricken areas of the developing world, can act as a barrier for women seeking help for pain conditions and as a result evidence shows that there is a prevalence of most types of pain in the developing countries compared with the developed countries. Cultural factors also influence a woman's likelihood of seeking treatment for medical conditions, including pain. For example, in many cultures, women believe that their suffering is part of their role in society. Additionally treatment by a male healthcare provider may also bring shame to a woman's family, forcing her to go without treatment and women may also encounter situations where physicians do not believe their pain is real.*

*Violence against women is a major health problem as well as a violation of a woman's human rights and is rooted in gender inequality. Violence is a major contributor to illness, death, pain, suffering, social isolation, loss of employment and productivity and restriction of freedom. In some societies violence against women is so common that women have come to accept that such acts are normal and acceptable. It may take place in various forms and in a variety of settings including the family, the community, state custody and armed*

*conflict. The most common form of physical violence experienced by women worldwide is physical violence by an intimate partner, otherwise called domestic violence. Forced or coerced sex or rape is another example of violence with increased risk of reproductive health hazards, disability and even death. All forms of coerced sex—from violent rape to cultural/economic obligations to have sex when it is not really wanted— increase the risk of micro-lesions and therefore of sexually transmitted diseases (STDs) and HIV infection.*<sup>5</sup>

South Africa is represented as a developing country within the international medical community as most of the population does not have access to first world medicine. We do however have the ability to increase our knowledge, application of better treatment practices and improve our standards.

As physiotherapists we are exposed both in the private sector and the community to patients with musculoskeletal, neurogenic and neuropathic conditions, most commonly in women. It is our duty to understand the differences that exist in female-centred conditions and adapt our treatment to improve pain relief and reduce suffering. It is possible to improve endogenous substances with various treatments at different frequencies including transcutaneous electrical nerve stimulation and acupuncture among others that may be more female-specific. We are also educators (teachers) and we

have the unique opportunity to help women to acknowledge their pain and seek treatment and we are listeners (councillors) and we can lighten women's emotional burden (as women best relieve their stress and pain by sharing their problem with a caring individual). Those physiotherapists with special interests in women's health can target various problems such as chronic pelvic pain and those prevalent in post-menopausal states (osteoporosis, facial neuralgias). We are advisors on exercise and it is well known that the immune system, the circulation, muscle strength and emotional health all benefit from exercise and we can encourage group participation wherever it is possible. Our knowledge of the physical mechanics of the whole body enables us to improve health in general and more specifically in women.

We can also assist by encouraging women to take responsibility for themselves and in improving their coping skills. A holistic approach to treatment is required where we address the problem of weight increase or decrease with dietary suggestions (increase protein and decrease carbohydrates to relieve inflammation and pain), vitamins that improve bone health and may impact on inflammation (glucosamine, omega 3, calcium), encouragement to do breathing, relaxation, mindfulness and self-hypnosis to cope with stress and pain and advice on how to keep moving!

## REFERENCES:

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2. Cahana A. Pain and the Philosophy of the Mind. Pain Clinical Updates IASP 2007; Vol XV, Issue 5:1 .
3. World Health Organisation. [http://www.health24.com/medical/condition\\_centres](http://www.health24.com/medical/condition_centres) 2008.
4. Finniss DG, Benedetti F. Placebo Analgesia, Nocebo Hyperalgesia. Pain Clinical Updates IASP 2007; Vol XV, Issue 1: 2.
5. All the information and references on pain in women mentioned above is obtainable from the Fact Sheets on 18 topics relating to pain in women available on the IASP website [www.iasp-pain.org](http://www.iasp-pain.org).

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