A MOVEMENT PROGRAM IN THE CONTEXT OF PAIN MANAGEMENT

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Theoretical and Historical Background of Pain

In 1986 the International Association for the Study of Pain defined pain as an 'unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage'. Chronic pain is the continuation of the experience of acute pain beyond a period identified as three months. This may then include people with a continuing known cause for their pain or those for whom the cause is unknown.

The derivations of the word 'pain' come from *'poena'* and *'konos'* the Latin and Greek words for punishment. A further historical influence comes from Aristotle who described it as a 'substance from heaven', while the Christians saw pain as atonement in their fall and redemption theology.

As pain is often described to the sufferer as being 'all in the head', it is important to understand the interrelation between the physiology and psychology of pain. Acute pain is received within the brain in two main areas, the hypothalamus and the limbic system. The hypothalamus is a gland responsible for regulation of the 'unconscious' or autonomic nervous system, which may have such effects as to trigger an increase in blood supply or activate proprioceptors in muscles. The limbic system is a network within the brain that links areas such as the hypothalamus and the frontal lobes and is loosely described as being responsible for 'behaviour'. The interrelation between the conscious and unconscious nervous systems makes the perception of and response to pain complicated, involving the higher cortical functions of the frontal lobes in perceptions of fear and prior pain memory, attention and arousal. These all affect the perception of and response to pain, and may, through the autonomic or unconscious nervous system, activate protective muscle spasm, swelling or other unconscious physiological responses.

A further explanation for the interrelation of the physiological and psychological experience of pain is postulated by Wall and Melzack's (1984) gate control theory which suggests that the higher cortical functions can inhibit the further reception of pain at the lower levels of the spinal cord. The 'gate' closes off or alternately allows reception of pain up the spinal cord to the brain. It has also been found that the body produces its own morphine-like substances, natural opiates called endorphines. The receptor areas of endorphines closely follow the nervous system pathways associated with pain.

The Chronic Pain Client

A chronic pain sufferer comes to the Pain Management Group feeling stressed, often anxious, depressed, angry or grieving. As all medical intervention has been completed prior to entry to the group, these people feel at the end of the line medically. The origins of their pain may be organic, non-organic, or simply unknown and include such diagnoses as back pain, over-use syndrome, myofaciitis and reflex sympathetic dystrophy. Most chronic pain sufferers have experienced major functional loss with accompanying diminution of activities; they are often withdrawn both physically and psychologically, some even becoming completely immobilised. In 1846 the medical pioneer Paget, in his often repeated quotation, described the condition as, 'They say, 'I cannot', it looks like 'I will not' but it is 'I cannot will'. These people feel a lack of a sense of control over their own health and a sense that control is dependent on external factors such as the medical profession, God or health workers. Blumer and Heilbrom (1981: 395-402) suggest some characteristics which are common to chronic pain sufferers:

- a prominence of conscious and unconscious guilt (pain as atonement)
- a history of feelings of defeat yet an intolerance of success (they are often perfectionists)

- a strong aggressive drive which is unfulfilled
- an inability to express feelings
- a conspicuous absence of fantasy life and a typically utilitarian mode of thinking

The Program

Clients contract to attend two sessions a week over a six week period. One of the sessions is an educative, supportive, psychosocial group aimed at insight, attitudinal changes and goal setting. Hendler, Viernstein & Shallenberger (1981: 333-40) found such group therapy to be advantageous for chronic pain sufferers. The second weekly session is a practical, technique-oriented session lasting two hours. The aim of the practical session is to give clients a sense of control over their lives and their pain by:

- rediscovering their 'will' through movement
- decreasing stress and perhaps their experience of pain by increasing physical relaxation and feelings of well-being
- giving a sense of distance from the pain by changing 'I am in pain' to 'I have a pain in my shoulder'
- discovering the imagination as a tool
- coming to some insight as to the way each person uses his/her body

The Content

As stress magnifies the experience of pain, relaxation needs to be incorporated as part of the movement program. A short sequence of Tai Chi is chosen because the movement is done in a relaxed way. It is also taught as a basis for further movement exploration. Tai Chi is known to have a positive effect on the autonomic functions by decreasing blood pressure and increasing heart rate thereby also increasing fitness and circulation and increasing blood supply to the unused parts (Jin and Singer, 1988). Tai Chi also proves to be unthreatening as a way of beginning to move as it requires no large or extreme movements. In addition it has the added relaxation component in its meditative approach, the associated breathing and the focusing of the mind on the sequence, removing the habitual preoccupation with pain. The philosophy that lies behind Tai Chi is also taught as this helps to re-orient the over-achieving perfectionist to an understanding of the sequence as a continuous flow rather than as goal-oriented.

The Method

The first movements in the Tai Chi session were approached conservatively. People sat upright in their chairs with their feet planted comfortably flat and apart on the ground. Because chronic pain sufferers become very protective of the source of their pain, gentleness and mindfulness were accented making an inward connecting of mind and body, thereby allaying fear. Initially a gently unextended circle was made by one arm being supported by the other hand at the wrist. The breath was added introducing the feeling of flow and unity of mind and body. People became aware of habitual over-extensions in their movements, disconnections and gaps in the flow. In later classes images were used to enhance the tone

and form of the movement. These images, plus music, in particular flowing music with the sound of the sea, added an imaginative element to the learning of the sequence.

The Tai Chi was learned and practised in each session, and became a base for further development of movement. For instance, in one session we looked at posture and manner of walking as it arose from the understanding of the Tai Chi experience; in particular how the feet connect with the ground, feeling the whole foot, the arch and its relationship to the spine. In a second session we watched each other push a heavy trolley across the room. This was enlightening, particularly to the over-use sufferers as eventually they were able to apply the principles of the Tai Chi 'seat'. The 'seat'ensures that movement of the upper limbs is part of a flow that starts with the

feet and moves upwards through the legs and abdomen. This flow gives an energy and strength that minimizes muscular effort and pain in the upper limbs.

Within the psychosocial component of the program, participants completed an activity diary which isolated, amongst other things, the relationship between stress and pain. It is known that stress depletes the natural opiates of noradrenalin and seratonal, both of which are required in the pain inhibitory system in the descending pathways from the brain. This is the basis for the emphasis on relaxation, both generally and within the movement component. A focus on deeper abdominal breathing, the continuous practice of abdominal breathing in isolation, within visualisation, and walking meditation proved to be very valuable. Initially this inward looking was a new and strange experience for most participants and people were only able to maintain short periods of concentration. By the last session a long, walking meditation accompanied by deep, slow recorder music ended with the group expressing the desire, quite spontaneously, to jump! I felt that this expression demonstrated the connections that people had made over the previous weeks and showed that the greater the ease and connection with the inner self, the greater the ease of expression in the outer self. The impulse to jump seemed to mark a shedding of the self-protective, fearful attitudes that had surrounded the movements of these people.

Outcomes

The expression outlined above was borne out in the self-report questionnaire that participants completed. The questionnaire rated the relaxation and movement component as consistently valuable whilst other aspects were more varied in their ratings. The self-report sections described the practical techniques as valuable as they were techniques that could be continued after the group had finished. Some of the participants went on after the group to learn the longer form of Tai Chi from outside sources to which they were referred. This had been the first time Tai Chi had been included in the program and learning the sequence required consistent attendance and home practice. Clients had shown their commitment to the program by their practice and attendance and this too was regarded as a measure of good outcome for the program. Absences were due to unforeseen medical appointments.

The Future

The program will expand to include a multidisciplinary team. The team will attempt to predict, by pre-program assesssments, the people most likely to benefit. It will also expand to include a more rigorous physical program that will look at specific functional and fitness goals. These goals will be followed-up by assessments that measure functional outcomes. The movement program described in this article will offer an extra weekly session that will go further in the expression of free movement. It is planned that the program will occupy five days a week for at least three weeks, thereby giving participants the opportunity to experience an active daily routine.

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