

The psychological management of pain: a case report and overview of techniques

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Summary

A serviceman seriously injured in battle after recovery from his initial injuries developed severe stabbing pain in his left leg. The pain was persistent, distressing and caused significant functional impairment. The pain failed to remit with pharmacotherapy which included sub cutaneous morphine. At the time of referral the

pain had lasted 18 months. The patient was treated with six sessions of cognitive behavioural therapy with significant reduction of his pain. Nine months later, on follow-up, he was pain free and functioning almost normally. The principles of psychological management of pain are also discussed.

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Introduction

Pain is probably the most frequent source of human distress. It is the most common reason for seeking medical care and it has been estimated that 80% of medical consultations include a component of pain. It is a major symptom in many medical conditions and can cause a severe impairment in a person's level of functioning. Psychological factors can significantly alter pain intensity or the degree of unpleasantness, a fact that is often forgotten in modern medical practice where pharmacological intervention takes primacy.

Over a hundred years ago Sherrington defined pain as "the psychical adjunct of an imperative protective reflex" (1). Pain can occur without tissue damage. The International Association for the Study of Pain defines pain as an "unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage". An understanding of the nomenclature regarding pain is useful. Nociception refers to pain caused by the stimulation of pain sensors. This is also referred to as "good" pain or "eudynia". Neurogenic or neuropathic pain is due to damage or malfunctioning of nerves and central pain is due to dysfunction of perception. Acute pain is pain that lasts within a specified time frame for a given condition and chronic pain is pain that persists beyond the time one would expect normal healing to occur (2).

The understanding of pain as primarily a psychological rather than a physiological process is important in the management of pain. The gate control theory of Melzack and Wall show the importance of the mind and brain in pain perception (3). When tissue is damaged or pain sensory nerve endings are stimulated, a signal travels from the site through nerve fibres to the spinal cord, and then to the brain. The brain interprets the signal about tissue damage or stimulation and pain is perceived. The gate control theory suggests that there is a type of "gate" in the spinal cord that can open and close based on input from the brain and the body. The opening and closing of the gate modifies how much information is sent to the brain from an injured area.

The theory accounts for how the mind or the cerebral cortex can control pain and also provides the basis for psychological interventions to control pain (4).

We illustrate a case of a serviceman who was suffering from severe pain following injuries suffered in battle. Several forms of pharmacological and physical therapies were tried and failed to alleviate his pain

Case Report

A navy serviceman suffered a blast injury whilst on operational duties in July 2008. He had a traumatic amputation of the right forearm, shrapnel injuries to the right thigh and the right flank, a ruptured colon, crush injury to the third lumbar vertebra resulting in paraplegia with incontinence. His right arm was amputated below the elbow. He had a hemicolectomy and fixation of the lumbar spine for spinal stabilisation. He subsequently received treatment at a rehabilitation centre. He developed intermittent severe pain of the left leg which had lasted 18 months at the time of consultation. The pain was severe, non-radiating, stabbing, and below the knee. It was present during most of the day. There were identifiable triggers. There was some relief when the site of pain was rubbed hard. He was treated with a combination of analgesics consisting of amitriptyline 50 mg nocte, morphine sulphate 15 mg four times daily, gabapentine 1200 mg three times daily and subcutaneous morphine 5 mg three times daily, but the response was short lived. He was diagnosed as having chronic regional pain syndrome (CRPS). In addition to the pain the prolonged hospital stay limited social activities and interaction with family and friends. His appetite was normal. Sleep was disturbed due to the pain but there was no early morning awakening. There was no hyperarousal, recurrent intrusive memories of the traumatic experience or avoidance of the reminders of the injury suggestive of post-traumatic stress disorder. He was distressed but not depressed. There were no depressive cognitions or ideas of self-harm. His cognitive functions were normal and insight was well preserved.