

Pain and Psychiatry

"The reign of pain is in the brain"

Dennis Turk

The treatment of pain has traditionally been undertaken by physicians, GP's, Orthopaedic surgeons etc. It was seen purely as an indication of the site of an underlying pathological process. It was viewed as a bottom-up sequence of events and the brain was seen purely as the end point of the nerve fibres. Much has changed in the last few decades and as the understanding of the brain has expanded, so too has the understanding of the dynamics of pain. It is no longer seen as a neural loop through the spinal cord to the relevant area on the sensory cortex and back down from the motor cortex to the musculature. The interconnections in the brain cortex and the modulatory pathways extending to and from the spinal cord have made this a very complex process indeed. Descartes defined pain as "an alarm bell ringing in a bell tower" 4 centuries ago. This then led to the idea that there may be "false alarms" so the concept of "psychogenic pain was born". Another definition of pain was put forward in 1986 by Merskey when he described pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage". This would suggest that pain is a perception rather than a sensation. This perception, we know, can occur even if harm has not or is not occurring. Cognition, emotion and behavioural responses are all consequent.

Three broad categories of pain are classified:

- 1) Neuropathic pain,
- 2) Nociceptive pain and
- 3) Functional/Dysfunctional/Psychogenic pain

and combinations of the three. Pain can also be acute or chronic and central or peripheral. Peripheral, the more common perception, is pain arising from the local tissues or in the peripheral nerves. Central pain is that which arises in the spinal cord or in the brain substance itself. Neurogenic pain is pain caused by direct damage to the nerve itself and nociceptive pain is due to stimulation of nociceptors. Functional pain is caused by a dysregulation in the brain with a decreased pain threshold and "generation" of pain along pathways associated with pain, the same pathways that regulate pain.

The pain pathways in summary follow a route from various receptors in the periphery to the dorsal spinal cord, up the spinal ascending pathways, to the sensory cortex and from there to various areas in the brain including frontal lobe, temporal lobe, motor cortex, brainstem, Thalamus,

Reticular activating system, Locus ceruleus and many more. The interactions are both ascending and descending and can be quite complex and will not be addressed in this paper.

What is relevant though is that the emotional and cognitive brain centres are highly influential in the perception of pain and can often be the origin of the perceived peripheral pain. The modulation of the intensity and duration of pain is also from these higher centres. It is also relevant that neurotransmitters such as Serotonin and Noradrenalin have been shown to be involved even at the level of the spinal cord in the modulation of the pain.

The relevance of all of this to us as psychiatrists is huge! There are two immediate implications of this:

1. Psychiatrists have to be more involved in the management of pain
2. The analgesic abuse that is so rife in our country can now be better understood in terms of both the expression of emotional pain physically, and the alleviation of emotional pain by the Opioid they contain.


The way forward seems to lie in the approach to managing pain being multidisciplinary and more holistic than it is currently. Pain is both an expression of both physical and emotional disorders (mood disorders, anxiety disorders, conversion disorders and substance abuse disorders), which are being poorly managed by us as psychiatrists and the general medical fraternity.

Pain clinics need to be set up to increase awareness of the problem and the focus needs to shift toward a combination of traditional medical together with psychotherapy as well physical therapies in the management. The result of poor management or understanding of pain is the reason analgesic abuse has become one of the biggest silent killers in our country. More than 50% of patients who are admitted to a psychiatric unit abuse or have abused analgesics. The relative ease of obtaining codeine-containing medication combined with the gross under diagnosis of psychiatric disorders in general practice has made this a rampant problem. The pain clinics should address this. Traditionally anaesthetists run pain clinics and the focus is management of peripheral pain. As much as there is a need for this type of intervention, it is time to look at the big picture and put into practice our understanding of the complexity of pain. ◆



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