Introducing Health Sciences: The Pain Clinic

Gate Control Theory

Commentary
Like many major hospitals the Royal Free in North West London has a pain clinic as part of the wide range of services it offers.

Man
Nice to see you, come and sit down. We met a couple of weeks ago, didn't we?

Woman
Yes. I just get quite a bit of relief actually, not a hundred percent, but I am sleeping at night, and I think I told you I was up three-quarters of the night, I couldn't sleep.

Man
'Cos you had this really bad pain down your left leg.

Woman
Unbelievable how bad it was, really, really, I mean you can't describe pain when it was so very bad.

Man
The gate theory originally was very simplistic and only referred to one set of circumstances but it led doctors, and then more recently patients, to understand that there isn't a simple wire, so to speak, running from the damaged fingertip, for example, to the brain, but rather a much more complex processing and gating system, and we've come to realise that pain transmission can be blocked or gated in many ways, for example by the tricyclics which I mentioned earlier but, for example also by helping the patient to change their attitude towards the pain, maybe to be less fearful of what the pain means, whether there is damage continuing, and so on. So there are all sorts of ways in which pain can be gated before the nociceptive signals get to the brain.

Man
We certainly explain to patients how the understanding of pain has developed historically, starting with Descartes, in 1764, with a very dichotomous understanding of pain, that it's all in the biology and a very clinical linear explanation of pain, forgetting that people do have minds and that they do think about their conditions and that the interpretation of the conditions will affect them very substantially and it took many, many years until 1965 before Melzack and Wall developed their so-called gate control theory of pain, understanding that how a person thinks about their pain, how they conceptualise their pain, believes about their condition, will certainly affect their pain experience, and if you can intervene on that level and teach patients strategies of how they can in a way shut the gate by changing the way they think about it, for example not to catastrophise about the pain condition that, you know, they're going to be in a wheelchair in five years' time, and also to provide patients with strategies and tools of how to deal with their social situation, how to deal with mood, anxiety, how to deal with their occupational stresses in relation to the pain, all these things can help them to shut the gate. The more a patient focuses on their pain experience, and the more they scan their body for any changes and any twitches, and any changes in the pain, the more the entire system – mind and body – will amplify the pain experience.

Man
Oh I think the gate theory stills holds a lot of value for us, not only in terms of the way we think, but also in the way that we can explain to our patients what a viable model, if you like, I think that it, the idea of a model where you've got, if you like, a way of, you can send afferent,

unpleasant information up, but you can also send messages down which are going to modulate a control that is very appealing.