Pain and hypnotherapy

What is the purpose of pain?

The ability to perceive pain is an essential feature of human biology; without it much damage can be caused such as in leprosy, spinal cord injury, diabetic neuropathy and congenital analgesia. Noxious stimuli to the body, perhaps caused by injury or surgical procedures, can be relieved at many points on the pathway from the site to the cerebral cortex of the brain where the stimulus is perceived to be pain. The immediate response to pain from, say, a burn is believed to occur at a spinal level, resulting in a reflex muscular response. Later the damaged tissues cause pain that is perceived at the brain. Nerves responsible for transmitting pain information can be blocked at the site by local anaesthesia (LA), at a site along the path of the nerve (a nerve block), at the point where they enter the spinal column (root block) or by an epidural injection. General anaesthesia probably works at a high level in the pain pathway but the pain of surgical procedures may adversely affect the patient’s physiology such as blood pressure and heart rate. This is why analgesics and LA are administered in addition to the anaesthetic agent.

There are many drugs that can be used for relief of pain. Ibuprofen (a non-steroidal anti-inflammatory drug, NSAID) is believed to act by inhibiting the enzyme cyclooxygenase and thereby production of prostaglandins (pain mediators) so producing a beneficial effect at the injury site, whereas paracetamol probably has a more central effect but has no anti-inflammatory action. The most powerful analgesic drugs are the opioids/opiates. Some occur naturally (morphine, codeine), some semi-synthetic (codeine, diamorphine - heroin) and some are synthetic (fentanyl, pethidine, tramadol). There are also opioids produced naturally by the body (endorphins) that can be increased by normal activity such as running, by placebos, acupuncture and trans-cutaneous electrical nerve stimulation (TENS). The opioid receptor antagonist naloxone has been shown to block the effects of endorphins and is evidence of the action of acupuncture.

The central nervous system has complex excitatory and inhibitory feedback mechanisms and this fact has been exploited in the control of pain from arthritis, fibromyalgia and neuropathy among others. The antidepressants amitriptyline, venlafaxine and mirtazapine have effects on the neurotransmitters serotonin and noradrenaline both of which are involved in the pain pathways. Gabapentin or the more potent pregabalin (both anticonvulsants) is often effective in neuropathic pain such as post-herpetic and trigeminal neuralgia although the mechanism is not clear.

What is chronic pain?

The acute pain of injury or operation is usually transitory and can be controlled by local means or systemic drugs, but when it lasts a long time (arbitrarily 6 months) it is regarded as chronic. The effects on the individuals suffering chronic pain vary from stoicism to deep misery. Work, mental ability, social and family relationships can all be adversely affected. The sufferer’s poor quality of life draws everybody in. It has been said that some patients need their pain to ensure the attention from others, but if their pain be relieved many show improvement in their Minnesota Multiphasic Personality Inventory (MMPI) scores. There is a tendency to stigmatise patients with chronic pain by labelling it “psychogenic”, saying that it is all in the mind. Of course it is, that is where pain is perceived. There is no physical or spiritual merit in suffering pain and it is generally accepted that inadequate treatment of pain is widespread throughout surgical wards, intensive care units, accident and emergency departments, in general practice, in the management of all forms of chronic pain including cancer pain and in end of life care (see Wikipedia “Pain management – Undertreatment”).
Treatement of chronic pain

Management of chronic pain is difficult and requires a multi-disciplinary approach, involving medical practitioners (often anaesthetists), clinical psychologists, physiotherapists, occupational therapists and nurse practitioners. Unfortunately, in the UK the availability of specialist Pain Clinics is very limited with waiting lists of many months. Treatment by a General Practitioner (sometimes with the help of a cancer nurse) often is a matter of trial and error starting with standard drugs, but without making use of pain inventories. In addition to the various drugs mentioned above, treatment in specialist clinics often involves LA nerve blocks and spinal root blocks, TENS, acupuncture and capsaicin patches. The LA bupivacaine has a long duration of action and the pain relief can last longer than the direct action of the drug. LA is often combined with a steroid such as triamcinolone to benefit from the anti-inflammatory effect. Epidural nerve blocks for 3 days before amputation have been shown to reduce the incidence of phantom limb pain.

Chronic pain frequently gives rise to anxiety, depression, loss of confidence and self-esteem, so anxiolytics such as temazepam and anti-depressants such as amitriptyline, fluoxetine, venlafaxine and mirtazapine are often added to the mix. The benefits of exercise are well recognised also psychological treatments. These include cognitive behavioural therapy (CBT), biofeedback/ neurofeedback and hypnosis.

Neurofeedback for treatment of chronic pain

Although neurofeedback (biofeedback employing electroencephalography,EEG) has gained popularity in recent years, probably due to the availability of relatively inexpensive simple EEG equipment, it is not new. Some 40 years ago Melzack and Perry [3] investigated alpha feedback training for patients with a variety of pain problems, using EEG. The combination of hypnosis and neurofeedback was significantly better than the other treatments in the trial. While it is possible to train oneself to produce alpha rhythms easily it does not follow that this is hypnosis nor that it will benefit chronic pain without the guidance and influence of a therapist. Vernon [5] in 2005 wrote an expansive review of neurofeedback training and concluded that “a clear connection between neurofeedback training and enhanced performance has yet to be established”.

Hypnotherapy for treatment of chronic pain

The authors Jensen and Patterson [1] published an extensive systematic review of 19 trials of hypnotic treatment of chronic pain including headache, cancer-related pain, sickle cell disease, fibromyalgia, osteoarthritis pain, low back pain, temporomandibular pain disorder, disability-related pain and mixed chronic pain problems. Some interventions were based on autogenic training. This typically involves focus of attention and relaxation but the distinction from hypnosis was unclear and both could be considered as having components of each other. In CBT the patient is required to modify their thoughts in positive ways, which demands active cognition – thought processes (although the patient is encouraged to achieve a state of relaxation) and preceding CBT by hypnosis in one trial was found to have a negative effect. However, the authors concluded:

“We view the most important clinical implication of the findings from this review as follows: hypnosis has been greatly underused as a treatment and should be at least offered as an option to far greater numbers of patients with chronic pain. Further, hypnosis is almost always a benign approach with a very little likelihood of causing negative side effects. We urge clinicians who work with patients with pain to consider obtaining training in hypnotic analgesia treatment, and to then consider how to incorporate this into their practice”.

They proposed a basic chronic pain hypnotic-analgesia intervention that consists of the following: (a) a standard hypnotic induction that includes a focus of attention and relaxation; (b) suggestions for alteration in subjective experience of pain; (c) hypnotic suggestion lasting at least 20 minutes; (d) four to seven sessions indicating “brief hypnosis treatment” and eight or more sessions to indicate “hypnosis treatment;” and (e) instruction in daily home practice of self-hypnosis.
Elkins [2] and the above authors published a significant systematic review of 13 clinical trials of the use of hypnosis for the management of chronic pain. They concluded that “hypnosis interventions consistently produce significant decreases in pain associated with a variety of chronic-pain problems”. The techniques employed to induce hypnosis were fairly consistent as were the post-hypnotic suggestions, the use of self-hypnosis/relaxation and provision of a tape recording of the sessions for the patient to take home. Scripts were occasionally employed. One of the criticisms of the trials was that there was a lack of standardisation of the hypnotic interventions.

Development of hypnotherapy in a Pain Clinic setting

Over a period of some six years I developed a system of hypnotherapy with the benefit of EEG monitoring [4] and accepted patients referred to me by the senior Pain clinicians. Rather than having a fixed number of sessions, as suggested by Elkins et al. above, it was possible to speed up the therapy for some patients while allowing more time for slow responders in a very cost-effective way.

Ultimately the hypnosis regimen consisted of :-
1. Induction by eye-fixation and progressive relaxation
2. Deepening by breathing exercises, suggestions of arm lightness/heaviness and fractionation i.e. taking the patient in and out of hypnosis several times in rapid succession with suggestions of progressive depth.
3. Prolonged (up to 45 minutes) guided visual imagery.

A pleasant ambience was created by low lighting, warmth, an aromatic oil vaporiser and background music or sounds. Patients were given audio recordings of the sessions for use at home.

The cornerstone of therapy is the post-hypnotic suggestion. This is a suggestion or idea that is given to the patient while in the hypnotic state that afterwards influences the patient’s behaviour, emotions, perceptions or beliefs in a beneficial, but often unconscious way.

Therapeutic aims

Routine daily use of autohypnosis
Promotion of positive thinking
Stress management
General “ego strengthening” – improvement in confidence, mental strength, instilling feelings of empowerment in ability to cope (changing from victim to hero)
Use of signals to control pain and pain transference
Modifying hopes and expectations
Removal of symptoms for the duration of the session.

Trying to make pain go away completely is futile so the emphasis is placed on reduction of the patient’s focus on his or her disability and become more positive and outward-looking. Nevertheless, the majority of patients had no pain by the end of a hypnosis treatment session.

Can hypnotherapy help the chronic pain sufferer?

Hypnotherapy patients attending the clinic were questioned about their experience in five aspects of their life: coping, activity, medication, pain and overall satisfaction.

All the patients felt that hypnotherapy had been “some help” or “very helpful and worthwhile”. There were also improvements in coping and activity, but a few took as much medication as before the hypnotherapy although they seemed less concerned about their pain. This may be a variant of “pain asymbolia” or pain-dissociation effect in which patients perceive pain but do not suffer from it, a beneficial but inexplicable hypnotic phenomenon. However, all the patients appreciated a better quality of life.

Summary
Hypnotherapy is very effective in pain management, but is seriously underused. The use of EEG monitoring enables the hypnosis and number of sessions needed accurately to be tailored to the individual and assures the therapist that an optimal hypnotic state has been attained.

References


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