MANAGEMENT OF PAIN

By Dr Joan Hester

I spend a lot of time every day explaining to patients why they have persistent pain, why it does not go away, why there are no cures, even with the sophistication of modern medical advances. It is a sad and startling fact that 21% of the population suffers with chronic pain, and the distress caused by chronic pain is mounting. There are some pains that are useful to us; if we break a bone the pain ensures that we rest until the bone has healed, 6 weeks to the day. Chronic pain serves no useful purpose; it is a defect in the signaling system for pain. The receptors are "set" at the wrong level. Doctors are trained to find a cause for the pain, remove the cause and the pain goes. Chronic pain is not like that. Think of it in terms of a railway system; it is not a problem with the train or the track but a signaling fault, too many signals are going to the brain, the sorting mechanisms have gone wrong, the brain is confused and sends the wrong signals back down the nerves again, perpetuating the pain. Chopping the pain out will not cure the problem; how can it? The pain pathways are still there. Amputation pain is a prime example of chronic pain arising from within the nervous system, and is an analogy often used to explain the mechanisms of chronic pain.

It is important to distinguish between sensation and pain. 60-80% of amputees suffer with phantom limb sensation which may or may not be painful. It was reported by Ambroise Pare in 1552 and by Weir Mitchell, a neurologist who worked during the American Civil war in the late 1800s. Phantom sensation is the sense that the limb is still exists, sometimes awareness is heightened when another part of the body is touched. Over time the limb "telescopes" into the stump, starting with the leg, ankle, then the foot until the toes are felt sticking out of the stump. Then they may go as well, ending with the big toe. The whole process may take 7-15 years. Phantom pain is a painful sensation coming from the phantom limb; it is usually worse when the limb has been painful prior to amputation. The longer the duration of pain the worse the phantom pain might be.

Then there is stump pain and sensitivity. The major nerves are transected at the time of amputation. These cut nerves send out "feelers" looking for the missing part of the nerve. These can become exquisitely sensitive or turn into a neuroma. Any touch can provoke a severe sharp shooting pain across the stump and into the phantom limb. The skin of the stump may become very sensitive to touch, and the amputee perceives a light touch as being painful; this is called allodynia. There may be abnormal feelings of hot and cold.

We now understand why these sensations occur and why the pain may be so persistent. Your limb is mapped onto the sensory cortex of your brain, with a different sized area for each part, your thumb or big toe having a much bigger area of representation than the rest of your limb. Cutting off the limb doesn't remove the nerve connections to the brain or the brain "mapping". In fact when the nerve in the limb is cut, the number of signals going to the spinal cord and brain actually increase, the nerve endings under the skin become "sensitised", more chemicals are put out when a nerve signals jumps from one nerve to another at a synapse, especially in the spinal cord, which is the processing centre or computer for pain signals. Cells that were previously silent trigger off messages to the brain, and the whole system becomes

"wound up". The brain reacts as it has learned to do, and this varies very much from person to person. One individual may become anxious, another not sleep properly, another tries to do too much activity to overcome the pain. Our responses are a complex interaction of heredity, the development of the nervous system as a child, learned behaviours, memory, mood, happiness or depression, punishment, optimism. There are so many individual variations. The sensitivity of the skin and spontaneous pain are a reflection of all these changes in the nervous system. The process is called central sensitisation, or "wind up"

Pain does not show on any tests; professionals are taught "pain is what the patient says it is", but how many doctors do you know that have not listened, made assumptions, have not understood?

The science of pain has advanced so rapidly; I could give you a three hour lecture on all the advances in our understanding, but the information trickles through slowly, it is difficult to grasp, and chronic pain is generally badly treated.

Information prior to amputation is a great help, insertion of epidural local anaesthetic prior to surgery and continued post op reduces the number of signals getting into the central nervous system, and helps to reduce post amputation pain. Starting drugs like gabapentin (a drug for epilepsy and neuropathic pain) very soon after surgery may have a preventative role, or an antidepressant such as amitriptyline. Surgical technique in hiding the cut end of the nerve under muscle instead of just under the skin is really important. Peripheral sensitisation can be helped with topical lignocaine, or lidoderm skin patches, TENS.

Mirror box therapy has been used, well fitted limbs are essential and sometimes opiates are required with the two other drugs to help. Each individual needs a complex management plan with integrated services.

Pain specialists and clinics can help, as can acute pain teams in hospitals in preventing or lessening the onset of pain at the time of amputation. Once established it is far more difficult to treat, many combinations of drugs might be used with TENS, acupuncture, steroid injections, and sometimes a sophisticated device called a spinal cord stimulator.

Depression and anxiety can be helped and sleep pattern restored with simple therapy. The British Pain Society promotes professional standards in pain management and aims to increase the awareness of pain management therapies amongst the public and politicians. There are pain specialists in every hospital in the UK, with a drive at the moment to relocate services in primary care.

I would ask you to remember that the management of pain is complex; it is relating science to practice, listening and understanding, managing a long term distressing problem. It requires skill, time and patience. But it often improves quality of life, reduces use of healthcare resources and brings back hope for the despairing.

Pain in the Older Person

In October 2006, the International Association for the Study of Pain launched a year to promote awareness worldwide of pain in the older people. The number of people over 65 years of age in the developed world

will increase from 17.5% to 35% by 2050, and the number of people over 80 years will treble in that time. Pain has a devastating effect on the quality of life of the older person, is often not recognised and remains under treated. There are many reasons for this, stoicism, fear of addiction to drugs, unwanted side effects, the lack of recognition of the existence of pain by healthcare professionals, and an unwillingness to provide appropriate treatment, through lack of time, uncertainty and a fear of prescribing strong analgesics.

The following vital action points come from the British Pain Society.

- Introduce pain as the 5th vital sign in hospital, residential care, nursing homes and community. Make the measurement of pain part of the QOF for GPs.
- Improve the assessment and re-assessment of pain by introducing a toolkit and teaching all carers how to use it
- Write simple guidelines on pain and its management for nursing homes and rest homes, and for patients and their carers
- Insist that pain assessment and management becomes a part of the National Minimum Standards for Nursing Homes
- Educate doctors, nurses and other healthcare professionals, carers and patients in the understanding of chronic pain and its management.
- Care for the carers
- Treat patients as individuals
- Improve communications between primary and secondary care
- Encourage all older people to keep basic medical information either in written form or on a memory stick