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Prescribing....

Opioids & chronic non-cancer pain in primary care

- A recent BMJ article advised that physiotherapy or paced physical activation and possibly CBT are likely to be "far more beneficial" to patients with chronic pain than opioids.
- Most of the randomised clinical trials on the topic were funded by the pharmaceutical industry and reported short term outcomes in small groups of highly selected patients.
- In recent years has been a large increase in the use of opioids, particularly in the US, where death from opioid overdose is now the second leading cause of accidental deaths in adults.
- The BMJ article concluded that simple prescribing of opioids such as in a primary care setting is unlikely to restore function in patients with severe chronic pain.

What are opioids ?

Opioids are a group of compounds that act by binding to opioid receptors, which are distributed in our brains, spinal cords and peripheral tissues. They are extremely important in the treatment of cancer pain. However published data shows a continual increase in the volume of prescribed opioids to manage moderate to severe chronic, non-cancer pain.

Changes in attitudes and enthusiastic marketing have driven a dramatic increase in their use, as well as their adverse effects. Death from opioid overdose is now the second leading cause of accidental deaths in the US. Some clinicians claim that opioids are underused for chronic pain, but the lack of good scientific data has prevented the formulation of evidence based national guidelines.

How well do they work for chronic non-cancer pain?

Several meta-analyses of the effectiveness of these drugs have been published. However their results require interpretation with some caution as most of the studies included were funded by the pharmaceutical industry. They reported short term outcomes in highly selected patients. Therefore their results may not be applicable to patients with real life patients with long term chronic pain and often complex care needs.

Most of the trials available found some effectiveness in chronic pain by reducing intensity. Meta analyses have also shown that opioids were effective in relieving neuropathic pain. However most guidelines regard opioids as second or third line because of the risk : benefit ratio. The results are even less encouraging for chronic non-neuropathic pain.

A 2009 Cochrane review reported that non-tramadol opioids only conferred small to moderate benefits in people with knee or hip osteoarthritis and that these were outweighed by large increases in adverse effects. The reviewers concluded that even for severe osteoarthritic pain, opioids should not be used routinely.

A systematic review from 2011 found that the effectiveness of tramadol for osteoarthritis was borderline and was poor for the others including oxycodone , transdermal fentanyl and oral morphine.

A large Danish cross sectional study on more than 16,000 people with chronic pain found that opioid treatment did not help pain relief, functional capacity or quality of life. Although causative relationships could not be ascertained, opioid use was significantly associated with reporting of moderate, severe, or very severe pain, poor self rated health, being unemployed, higher use of healthcare, and a reduced quality of life.

How safe are opioids for treating chronic non-cancer pain ?

Serious harms known to be associated with opioids include

- Falls leading to fractures : in one study opioid use in patients who had had fractures was 8% vs 3% in a matched control group of people not on opioids.
- Respiratory depression: can be fatal but is rare and occurs mostly during dosage changes, errors and misuse.
- Deaths : caused by inappropriate intake by the patient, prescribing errors eg high doses to opioid naive patients, and diversion of prescribed drugs ...estimated to occur in at least 4% of all prescribed opioids doses in the US.

Other possible harms include

- Negative endocrine effects, mainly via the hypothalamic-pituitary-adrenal axis, leading to opioid induced androgen deficiency (OPIAD), reduced testosterone production leading to osteoporosis and immune suppression in men. Five million men in the US may have OPIAD.
- Opioid induced hyperanalgesia: worsening pain sensitivity in patients chronically exposed to opioids, which may have important implications in the treatment of chronic pain when high doses are used and in people with underlying central sensitisation disorder such as fibromyalgia.
- Potential for abuse and addiction: a recent study in a non-selected population found that about 1 in 3 people receiving long term opioids for chronic pain met DSM criteria for addiction. However other studies reported far lower rates.
- Sedation and cognitive impairment: a particular problem when introducing or changing opioids or increasing doses.

How do opioids compare with other drugs for chronic pain ?

Direct comparisons between non-opioids and opioids are rare and contradictory. Most are short term and are limited to osteoporosis and lower back pain. Being industry sponsored they are likely to be limited to drugs still on patent. Many patients with chronic pain have complex care needs and hence varying risk factors. A personalised approach to care is therefore required.

There are a number of cost effectiveness analyses, usually sponsored or performed by the industry, which demonstrated a cost reduction from a payer's perspective. However the BMJ reviewers concluded that the overall pharmaceonomic evaluation is negative. The use of opioids, in their opinion, increases the overall costs of healthcare due to increased disability, cost of consultations and drug supplies as well as work absences and reduced social functioning. There are also the societal costs of prescription opioid misuse, estimated to exceed $56 billion in the US in 2007.

In summary

There is little evidence of benefit for the simple prescribing of opioids for people with chronic pain of non-malignant origin. Physiotherapy, paced physical activation and possible CBT are more likely to restore function and this may well require referral to appropriate pain services.

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