Infectious Smiles

Focus on Anti-infectives

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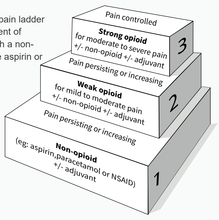
The WHO analgesic pain ladder proposes that treatment of pain should begin with a non-opioid medication like aspirin or paracetamol [13,14,15]



The analgesic pain ladder: a good concept gone astray

In 1986, a simple model was developed for the slow introduction and upward titration of analgesics, which became known as the analgesic stepladder.[1] *Before this, people were dying in unnecessary pain because drug regulations introduced earlier in the century had increased the stigma and fear associated with both prescribing and taking opioids.*

The underlying principle was that analgesics should be used incrementally, starting with non-opioids, progressing through mild and finally strong opioids, dosed in accordance with the patient's reported pain intensity.

> "The stepladder approach had tremendous value when it was introduced because it legitimised the use of opioids"

It was expected that opioids would be needed in increasing doses to overcome pain as cancer progressed. The goal was to allow patients to be as comfortable and interactive as possible during the short march towards death. Risks of addiction and hastened death were accepted in the principle of double effect: comfort is paramount.[2]

The stepladder approach had tremendous value when it was introduced because it legitimised the use of opioids, overcoming prejudicial and regulatory stigmas that had hampered compassionate pain care, especially for patients dying from cancer. The success of opioid treatment in terminally ill cancer patients set the stage for extending the same moral imperative and treatment principles to the treatment of chronic pain, where previously opioids were considered too risky or not effective.[3,4] Suddenly, because chronic pain is ubiquitous and open ended, the floodgates opened. Over the past 30 years, in much of the developed world, we have seen more patients treated with opioids at higher doses than ever before. The extent to which the more liberal use of opioids would cause harm was not predicted.

> "But patients treated with opioids can experience many other adverse consequences (including higher rates of addiction than previously envisaged, cognitive impairment, general lack of wellbeing, dysfunctional relationships and poor quality of life, hormonal effects, and higher accident rates), with no clear evidence that the treatment is actually relieving pain in the long term.[6,7]"

The increase in opioid prescribing and its adverse consequences are nowhere more obvious than in the United States, where sales increased fourfold between 1999 and 2010 with parallel increases in prescription opioid deaths and admissions for misuse.[5] These alarming statistics are an indication that unfettered use of opioids in the community can have disastrous social consequences. But patients treated with opioids can experience many other adverse consequences (including higher rates of addiction than previously envisaged, cognitive impairment, general lack of wellbeing, dysfunctional relationships and poor quality of life, hormonal effects, and higher accident rates), with no clear evidence that the treatment is actually relieving pain in the long term.[6,7] Rates of harm have been directly correlated with dose, which in turn is correlated with continuous use, the precise dosing principles promoted by the WHO stepladder.[8] This is compounded by the phenomenon of "adverse selection" whereby the highest and most harmful doses tend to be prescribed for people in the greatest distress, who in turn, are those most at risk.[9,10]

The somatosensory component of pain of whatever aetiology is always nuanced by cognitive and affective influences, but these may assume greater prominence in chronic pain than in acute or cancer related pain. Functional neuroimaging has shown that pain that is initially associated with brain regions linked with the corresponding anatomical area becomes increasingly associated with emotional and reward brain circuits.[11] Thus prolonged pain becomes linked less with nociception and more with emotional and psychosocial factors. So what does the report of pain intensity actually mean when pain is chronic, and to what extent is the report of pain an attempt to communicate distress, which cannot be well addressed by opioids?

Our mistake, we believe, was to treat chronic pain as if it were acute or end of life pain. These short lived pain states tend to exhibit a predictable and linear trajectory, they tend to respond well to opioids, and titrating opioids against pain intensity usually works well. Chronic pain, on the other hand, does not have a predictable or linear trajectory and often does not respond well to opioids other than early in the course of treatment. Not only the report of pain, but also the experience of pain, is altered by mood, circumstance, stress, duration, meaning, acceptance, expectation, and fear. With so many factors altering chronic pain as it is experienced and reported, it is not surprising that pain scores do not respond in any predictable fashion to opioids.[12]

In fact, attempts to lower pain scores using opioids has led to overuse and adverse outcomes without any appreciable lowering of the chronic pain burden at the population level.

The stepladder approach is simple and has had value where excruciating and short lived pain would otherwise be left untreated. But such a simple approach is not appropriate for chronic pain, which is highly complex and for which no glove fits all. The idea that for patients with chronic pain, opioids titrated to pain intensity can reliably reduce pain and improve quality of life, not only exposes patients to harm but gives them unrealistic and potentially damaging expectations, as well as resulting in therapeutic disappointment for clinicians.

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