A painful reminder

Loch Ness, with a depth of 227 m and a length of about 36 km, is the largest lake by volume in the UK. This freshwater lake in the Scottish Highlands is claimed to be inhabited by the eponymous and elusive Loch Ness Monster. One of Scotland's oldest and most enduring myths, the Loch Ness Monster is also affectionately known as 'Nessie'. There have been suggestions that the Loch Ness Monster may be a large fish such as a sturgeon or a prehistoric, Jurassic-age marine reptile called a plesiosaur. Recently, following a hunt by an international team, led by researchers from New Zealand, it was speculated that the Loch Ness Monster may be a giant eel[1]. However, to date, evidence of the existence of the Loch Ness Monster remains unproven and anecdotal.

In Whitebridge, a small village on the south-east of Loch Ness, lives 71-year-old Jo Cameron. Like a fictional character from a superhero comic, Jo's superpower is that she does not feel pain. Despite suffering from severe, debilitating osteoarthritis, she felt nothing. She did not complain of any discomfort, not before, not during, and not after, hip replacement surgery. Childbirth, a broken arm, and surgery on a hand deformed by arthritis are other instances in her medical history in which pain was not a feature. She has even had dental procedures without the need for any local anaesthetic.

Unfortunately, the inability to feel pain has unintended consequences. Jo also reported times when she had burned herself and reacted only when she smelled burning flesh. Until she was 65 years old, Jo did not, and nor did anyone else, realise that she was different when it comes to experiencing pain. Jo was later diagnosed as being 'pain insensitive'. The sequencing and analysis of her genome revealed a previously unidentified mutation and the explanation for her immunity to pain[2].

Pain, defined as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage"[3], is an essential warning system. Pain encourages vigilance and helps prevent injuries. Often, the occurrence of pain may be the first indication of a health problem; continuing pain may be suggestive of chronicity; increased pain may be symptomatic of further deterioration and a reduction of pain may be evidence of resolution.

There are few health care conditions more debilitating and dreadful than severe or unremitting pain. Hence, the development of pain control medications is considered a major advancement in modern health care. Opioids are a well-known pain relief class of drugs and are some of the strongest pain medications available. Used appropriately and with care, opioids relieve patients of pain and suffering, especially those suffering from chronic or persistent pain. The mode of action of opioids is on areas in the spinal cord and brain, blocking the transmission of pain signals. Although opioids are effective for relieving pain, the unintended consequence and risk is that they can lead to dependence, addiction, overdose and even death.

In a consumer-driven health care system, patients are less likely to accept or tolerate pain. They are more likely to expect, demand and receive strong pain control medication. As a result, a huge rise in legal prescriptions, poor monitoring in which patients continue to take opioids even when symptoms have subsided and pain relief medication is no longer necessary, plus an increase in the use of illegally obtained opioids have all contributed to an addiction epidemic. The term 'pill mill' is used to describe any health care practitioner or facility that prescribes, or any pharmacy that dispenses, powerful, addictive drugs without a legitimate medical reason.

It has been reported that, in the USA, 11.4 million people misused prescription opioids and over 130 people were estimated to have died every day from opioid-related drug overdoses[4]. The total economic toll of prescription opioid misuse in the USA is estimated to be $78.5 billion a year, including the costs of health care, addiction treatment, decreased industrial productivity and criminal justice consequences[5]. As a result, in 2017, the US Department of Health and Human Services declared a public health emergency and announced a five-point strategy to combat the 'Opioid Crisis'[6].

Not untypically, what is happening on the other side of the Atlantic Ocean has arrived in the UK. In England alone, more than 41 million opioid prescriptions were issued in 2017, the equivalent of 79 pill packs a minute, and representing a rise of 10 million prescriptions within a decade. This is accompanied by an increment in excess of 11,500 people a year needing hospital treatment because of opioids, with around 2000 deaths annually. It has also been found that prescribing rates for opioid drugs had a strong association with deprivation, being higher in areas of greater deprivation at a population level[7]. While it may be argued that the situation in the UK is not as dire as that in the USA, there is still understandable and growing concern on the need for urgent action. Similarly, the question has been asked as to whether other European countries will also be facing an opioid epidemic[8].

In the effort to combat the opioid crisis, all health care workers, including dental practitioners, should discourage the unnecessary use of opioid drugs and instead opt for milder analgesics. If opioid drugs are absolutely necessary, close monitoring and discontinuation of usage as soon as pain has abated should be actively encouraged. Appropriate patient education should be included as part of the strategy to combat opioid addiction. In the UK, a recently announced initiative involved the implementation of clear and explicit warning labels on all opioid medications to emphasise the addiction risks. In addition, the National Institute for Health and Care Excellence (NICE) has published opioid detoxification guidelines to help adults and young people over 16 years old who are dependent on opioids to stop using these drugs[9]. NICE has also recently announced that it will be developing guidelines on prescribing opioid drugs.

Pain is also a common feature of endodontic problems. Unfortunately, for various reasons patients may not seek emergency care for a painful endodontic problem. Instead, they often self-medicate with any pain control medication at hand. Even with, for example, over-the-counter analgesics, such as paracetamol (acetaminophen), inadvertent overdose has been reported to be a major public health problem requiring emergency hospital admission[10].

However, in everyday endodontic practice, there is still no better way of relieving the pain of an acutely, irreversibly inflamed pulp than by commencing root canal treatment, or with an acutely infected tooth initiating local measures such as drainage via the root canal system. Correct procedural intervention by treating the primary problem can lead to permanent resolution of pain, rather than managing symptoms with drugs; there is no 'magic bullet'. Any residual or postoperative pain is also unlikely to last long, usually for a duration of not more than 24 to 48 hours. In both cases, there is no need to prescribe unnecessarily strong and addictive pain control medications.

It is a timely reminder that pain relief drugs can kill not only pain but potentially patients as well when misused, overused and abused.

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