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Chronic pain and opioid analgesic use: A case report

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Abstract

Relationship-based medical care is essential in the management of chronic pain. Opioids are often ineffective and can cause significant harm. However, there is significant time pressure, and there are insufficient resources and guidelines for GPs to be able to offer alternatives, putting the NHS at risk of a growing opioid epidemic.

KEYWORDS

anesthesia, chronic pain, health maintenance, pain management

1 | INTRODUCTION

Opioids are often ineffective for managing chronic non-malignant pain. If prescribed, they should be as part of an opioid trial with clear aims of therapy, tapering/stopping the opiate if they are ineffective, or if they are causing adverse effects. Clinical guidance is available but there are many gaps in the evidence.

Opioid analgesics are commonly prescribed to relieve pain. They range in strength from weak opioids, for example, codeine, which is found in the most commonly prescribed opioid preparation co-codamol (a combination of paracetamol and codeine) to strong opioids such as morphine, fentanyl, and oxycodone. Their important role in the management of acute and terminal cancer pain is well established but their benefits have been increasingly challenged in other conditions. In particular, concerns have emerged about their use in chronic non-cancer pain, such as lower back pain, which is estimated to affect 35%–51% of adults in the UK.¹

Opioid analgesic prescribing in recent decades in England and many other developed countries has increased and has been described as an ‘opioid epidemic’.² Concerns about the use of opioid analgesics in chronic pain related to the lack of evidence of effectiveness³ and the risk of tolerance, dependence, addiction, and side effects, leading to reduced quality

of life and increased use of healthcare resources.^{1,3} Here we report the case of a young man who developed chronic pain after a relatively minor injury, we highlight the problematic aspects of his opioid use and we discuss the best available evidence to guide doctors in treating similar cases.

2 | REPORT

2.1 | Clinical details

In August 1996, a 25-year-old male injured his left knee and dislocated his left elbow falling approximately 3 m from a fence in the course of his duty as a police officer. He was seen in A&E, his shoulder dislocation was reduced under Entonox, and he was discharged, but despite physiotherapy he continued to complain of pain in his left knee.

In September 1996, he was acutely tender over the antero-medial joint line and was suspected to have a peripheral tear in his medial meniscus for which he underwent an arthroscopy which showed some patellar degeneration and a peripheral lesion on the medial meniscus. He continued with physiotherapy post-surgery but he was still experiencing pain, and a follow-up orthopedic appointment noted a patellofemoral click and also a snapping sensation on lateral movements of the patella and

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he was admitted for another arthroscopy and lateral released in May 1998. However, the pain continued and he was given two cortisone injections in October and December.

His pain persisted in the posterior knee and was characterized as a constant dull ache that worsened with activity. An MRI in July 1999 showed a peripheral tear of the medial meniscus and he underwent another arthroscopy and partial medial meniscectomy. He was on Voltarol 50 mg TDS post-operation. He had another arthroscopy in April 2002 to address the persisting pain and instability in his knee and the main pathology reported was flap tear of the medial meniscus, and they also found crush tearing of the posterior horn of the lateral meniscus. He was discharged with Kapake BD.

He had a left ACL reconstruction in Oct 2002 due to recurrent episodes of his knee giving way. The surgery was successful in restoring stability, however, the pain was not resolved. He was given celecoxib 200 mg BD and paracetamol 1 g QDS post-operation.

In September 2003, he had another arthroscopy, chondroplasty in the patellofemoral compartment, and release of adhesion and scar tissue. He was given Voltarol 75 mg BD and Cocodomol. There was still pain and discomfort in his knee and was advised to continue physiotherapy and regular NSAID therapy. His orthopedic surgeon discussed with him that they will not be taking further surgical intervention and would be aiming for symptomatic control. A follow-up MRI in April 2004 showed minor chondral damage but no more surgical intervention would be taken at that point. He was taking Celecoxib 100 mg BD and Codeine 15 mg QDS.

In the 8 years following his accident, the patient saw numerous orthopedic surgeons, and his pain was attributed to several different pathologies. He underwent six separate surgical procedures, none of which led to any improvement in his pain.

2.2 | Analgesics

He began taking regular analgesia in 2001 starting with diclofenac and codeine. In 2003, his pain was impeding his ability to work and celecoxib was added. This was still an insufficient analgesic and he was prescribed co-dydramol and diclofenac. However, his pain was still intolerable and he was started on tramadol and paracetamol. The tramadol was effective in helping him manage his pain but caused nausea. He tried meptazinol and nefopam but both were ineffective and he reverted to tramadol. In 2005, gabapentin was added to his drug regime as tramadol and paracetamol alone were no longer sufficient.

In 2005, he was referred to an NHS 6-week pain management program (PMP) at the Northern General Hospital which adopts a holistic, multi-disciplinary way of helping chronic pain patients understand and manage their pain. The aim was to help him find ways to make his pain more bearable and look at non-drug treatment options. He saw a pain specialist

as part of the PMP who cautioned against further dose increases of all analgesics and advised him to reduce his opiates. This intervention helped him realize that opiates had largely been unhelpful for him. He concluded that there would be no complete resolution of his pain with medication alone and he adopted a routine of daily exercise including swimming and treadmill walking, weekly massages, and regular Reiki. To avoid further adverse effects from his medications he stopped tramadol and gabapentin abruptly without medical advice and he experienced significant unpleasant withdrawal effects such as hot sweats, intense pain, and nausea.

In 2010, work-related and social stress led to a decrease in his pain tolerance, and amitriptyline was added to his regime. His GP also supported and monitored the gradual decrease of his gabapentin use.

He currently uses tramadol 50 mg QDS, paracetamol QDS, amitriptyline 25 mg nocte, and topical Diclofenac. He has been stable on the same doses of these medications for many years. He does not identify as being dependent on any of his analgesics although he recognizes that he has developed some tolerance to tramadol and this is his primary motivation for avoiding further dose increases.

2.3 | Social history

At the time of the injury, the patient was a police officer working with the South Yorkshire Police. He was single and had no children. The pain he experienced affected his ability to perform his job which led to tension with his employers and then depression/anxiety which exacerbated his pain. His employer provided cognitive behavioral therapy which helped him to cope with his anxiety but despite this, he was deemed permanently incapacitated in 2008 and was given a part-time administrative role which led to a pay cut and a loss in self-esteem and job satisfaction. He eventually retired on ill-health grounds in 2014.

Despite having a good relationship with his GPs, he blames them for iatrogenic harm from medication side effects and for not explaining the nature and natural history of chronic pain. He remains in pain which adversely affects his life but with his exercise regimen and support from his GPs, he feels in control.

3 | DISCUSSION

3.1 | Avoid opioids if possible

There is little good quality evidence to support the effectiveness of opioids for chronic pain, most of the published trials lasted no more than 4 months, they excluded high-risk individuals and they did not assess addiction risk.⁴ There is no consensus on how opioids compare with alternative pharmacologic options such as tricyclic antidepressants, muscle

relaxants and NSAIDs in treating musculoskeletal pain, but there is an increasing body of literature surrounding the development of tolerance and pain sensitization caused by endogenous and exogenous opioids, resulting in a decrease of its analgesic effects.^{4,5} When the patient's pain intensified in 2010, amitriptyline was prescribed which was effective in combination with other analgesics. As a result, a higher dosage of opioids was not required. Patients often still take opioids despite waning of analgesic effects due to dependence or addiction.⁶ Psychologic dependence on opioids and the adverse effects of long-term use were discussed with the patient during his PMP. He recognized that he was developing tolerance to opioids and became motivated to start a gradual deprescribing.

3.2 | Alternatives to opioids

The Centres for Disease Control and Prevention (CDC) recommend the use of non-pharmacologic (CBT and exercise therapy) and non-opioid options as first-line treatments for chronic pain.⁷ Increasing physical activity is a low-cost intervention with minimal risks which can improve pain levels, improve physical function and reduce work disability. Biopsychosocial interventions such as pain management programs (PMPs) are aimed at addressing the complexities faced by patients with chronic pain. PMPs are delivered in group settings by an interdisciplinary team working closely with patients.⁸ Patients that have undergone a PMP have demonstrated improvements in pain intensity, pain-related beliefs such as catastrophizing, mood, and pain-related disabilities.⁸ Undergoing a 6-week PMP led to significant changes in the patient's outlook on his pain management. It also introduced non-medical alternatives which were pivotal in helping him self-manage his chronic pain. The non-pharmacologic intervention was introduced after undergoing PMP which could have contributed to his struggle to maintain physical function at the start of his pain. Live Well with Pain is a free online resource that aims to help patients self-manage. The online site includes a section called the Opioid Thermometer which is targeted to think about the doses of medication they are taking and serve as a reminder of the harms associated with opioids.⁹ There is also a Pain Toolkit that guides patients on how to self-manage their pain.⁹

3.3 | Practical steps in opioid prescribing

The CDC⁷ and *Opioid Aware*¹⁰ provide guidelines and practical steps in opioid prescribing, describing how to undertake an opioid trial, and how to taper and stop opiates. Both resources highlight the need to establish goals for pain management and emphasize that complete pain relief should not be the goal, but rather reducing pain enough to engage in self-management. After the patient's last surgery in 2003, it was decided that there was no surgical solution

to his problem with his left knee, leading to frustration due to the impact of his ongoing pain. When opioids were first prescribed, there was no discussion documented about goal-setting which led to unrealistic expectations about pain relief. Both CDC and *Opioid Aware* recommend keeping a record of adverse effects, dosing, discussions about risks and benefits, and circumstances under which prescribing should cease. Opioid therapy should be discontinued if the benefits are outweighed by the adverse effects. *Opioid Aware* recommends the involvement of relevant medical specialties such as mental health and substance abuse if the patient presents with complex needs. Good communication and shared decision-making are essential parts of good care.³

3.4 | An opioid trial

Opioid therapy should only be considered if other multimodal therapies have not yielded adequate improvements in pain and function. Patients should only start an opioid trial if they do not have contraindications for opioid therapy and after a discussion about the potential harms and benefits of opioid therapy.³ An opioid trial helps to establish if the patient has a reduction in pain with the use of opioids. Managing side effects and achieving optimal doses can be further explored if opioid therapy is pursued after a trial.¹⁰

Opioid Aware provides some practical steps on how to conduct an opiate trial. A trial should first begin with a discussion with the patient on assessable outcomes such as achieving functional improvements for example, attending work, exercise, and sleep. A trial can last for 1-2 weeks and patients should start on a low dose of immediate-release morphine (liquid or tablets). The patient could be advised to explore a range of doses between 5 and 10 mg of morphine. To assess success, a diary should be kept during the trial, with a twice-daily record of outcomes discussed such as pain intensity, activity level, and sleep.¹⁰

3.5 | Tapering and stopping strong opiates

Tapering means reducing doses whilst minimizing withdrawal symptoms, often with the aim of complete discontinuation.³ Abrupt discontinuation can result in opioid withdrawal symptoms which was experienced by the patient when he tried to stop taking his pain medication leading to hot sweats, nausea, and increased pain.⁵ Consider dependence in the following scenarios: long-term use for non-malignant pain, history of psychiatric illnesses or emotional trauma, history of substance misuse, problems with prescriptions (lost prescriptions, early requests, taking higher doses than prescribed), family members are concerned about opioid use, refusal or failure to attend medication reviews, 'doctor shopping' for prescriptions, functional deterioration (eg, being unable to

work) and declining specialist referral to assess the underlying problem.³ Before tapering, discuss the rationale and potential benefits with the patient, agree on outcomes and an appropriate time frame and discuss signs and symptoms of withdrawal. Close monitoring and regular medication reviews with his GP was an essential part of the tapering process. The good relationship with his GP allowed for open communication about the necessity to be on certain opioids and the possibility of reducing doses. The dose should be tapered by 10% weekly or two-weekly.³

4 | CONCLUSION

There is a compelling logic to treating pain with analgesics including using opioids. However, for chronic pain, this logic does not fit with the evidence which shows that opioids are often ineffective and can cause significant harm. Most prescribing for long-term conditions is done by primary care, most consultations about chronic pain are with GPs, and they are often difficult consultations,⁶ there is significant time pressure and there is a lack of guidance to support for GPs.⁵ Developing a shared understanding with the patient requires sufficient time to discuss complex ideas, it requires trust, regular follow-up, and continuity of care all of which are under threat from a shortage of doctors, growing demand and the prioritization of access over continuity. In many areas, specialist services are not easily accessible or are not available at all. In the absence of sufficient resources to meaningfully assess and manage a large number of patients with chronic pain, pharmacologic management including opiates is likely to remain the default response, deprescribing is unlikely to be prioritized and the NHS is at risk of a growing opioid epidemic.

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CONFLICT OF INTEREST

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AUTHOR CONTRIBUTIONS

Michael C. H. Quah: Interviewed the patient and prepared the manuscript. Bethany C. Marney: The patient's General Practitioner and interviewed the patient. Richard J. Cooper: Prepared the manuscript and provided expert opinion. Jon M. Dickson: Supervised, prepared the manuscript, and gave final approval for the manuscript.

ETHICAL STATEMENT

Ethics committee permission was not required.

CONSENT STATEMENT

Published with the written consent of the patient. The patient gave consent and approved the final manuscript. All the mentioned authors consent for publication.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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