History

A functional dependence? A social history of the medical use of morphine in Australia

The history of morphine use in Australia has shaped public perception and current challenges

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Morphine has had an important role in the history of Australia and continues to play a major part in the medical, social and economic aspects of this country.[1] The extent of its multitude of uses (and misuses), its constant depiction in the media, and its role in the history of Australia have created a complex public understanding of the drug. There is a broad array of perceptions regarding addiction, tolerance, fear of side effects and an association with death, which may complicate morphine's use in clinical care.[2] An understanding of the history of morphine in Australia can enable a greater understanding of its current use, and provide some background to the increases in opioid prescription seen in the past two decades.[3,4]

Such a rapid expansion in the use of medical morphine has been experienced before in Australia, on a much greater scale, towards the end of the 19th century before the creation of a regulatory system.[5] Although Australia currently has the fifth highest per capita consumption of licit morphine, this is a marked decrease from the first half of the 20th century — in 1936, 14% of the world's legally produced morphine was consumed by Australia, which then had a population of 6.7 million.[4,6]

Here, we review the history of morphine use and regulation in Australian society, and consider how the past may influence the attitudes and perceptions of the present. We searched the following electronic databases for studies published in English: MEDLINE (1950 – March 2013), the Cochrane Library, PsycINFO (1806 – March 2013), CINAHL, EMBASE (1980–2013), PubMed and ProQuest. Search terms included morphine, opioids, Australia, narcotics and law. These electronic searches were supplemented by hand searches of key references cited, including historical sources.

Early use of morphine

Opium was widely used and unregulated in colonial Australia, although records of its early use are incomplete. Increased use coincided with the arrival of Chinese immigrants during the gold rush of the 1850s, as this population had high rates of opium use for recreational purposes following British importation of opium to China and the subsequent Opium Wars.[5,7,8] It was widely available as a raw product, often used for smoking or dissolved in alcohol as a mixture known as laudanum.

Morphine was originally isolated from opium in 1804 by German pharmacist Friedrich Sertürner, but it was initially difficult and expensive to manufacture.[9] Laudanum, by contrast, was readily available, cheaper, well known to doctors and patients alike, and showed similar clinical benefits, although it varied greatly in strength and additives. It was not until the introduction of the modern hypodermic needle in 1853 that morphine became more readily used by physicians, initially for surgical interventions.[9] The American Civil War (1861–1865) saw the first use of morphine on a wider scale, where, especially due to its multiple routes of administration and short onset of action, it was recognised for its utility.

Morphine gained popularity in Australia in the 1860s, marketed as an antidiarrhoeal medicine for infants and young children at a time when infantile diarrhoea was responsible for around a quarter to half of all infant deaths.[10] Morphine and laudanum were sold virtually unregulated, often by door-to-door salesmen in the form of mixtures, powders and lozenges. The use of morphine increased as physicians became more accustomed to prescribing, dispensing and administering the drug, and societal recognition increased due to marketing through newsprint and magazines.[10] Compared with laudanum, which was often inconsistent in strength, morphine was recognised as having standardised dosing and therefore a predictable effect.

Growing concerns

The wide availability of opioids continued unregulated, with neither the public nor government expressing appetite for change, for two main reasons. First, the morbidity associated with infantile diarrhoea ensured great public support for unrestricted availability of a possible remedy. Second, the Australian population was widely dispersed, and with few experienced medical practitioners there was a need for fast access to these medications.[10]

However, the harmful effects of opioids became increasingly evident over time. In the 1880s, Queensland coroners investigated 98 infant deaths and determined that 15 of these children had been given "infant soother" drugs, most of which contained opioids.[10] Coronial records demonstrate that increasing numbers of infant deaths related to opioids were investigated in the 1890s and early 20th century, and doctors became reluctant to sign death certificates in cases where opioids had been used.[10] While anxiety surrounding the overuse of opioids for infants grew, for many, the benefits continued to outweigh possible harms.

Australian society seemed largely indifferent to the use of medical opioids for recreational or habitual use, as this practice remained mostly invisible and of little moral consequence.[5] The use of opium for smoking was viewed differently, being closely associated with the Chinese population and carrying particular social and racial

stigma.[8] The Chinese immigrants at the time were poorly accepted in many respects, due to their foreign customs and language, yet the smoking of opium was a very visible vice to which racist sentiment could easily be attached.[5] As *The Bulletin* wrote in 1886, "… where the legions of aggressive stinks peculiar to Chinamen seem ever to linger … The very air of the alley is impregnated with the heavy odour of the drug".[5]

Legislative changes

The first Australian laws to limit the supply of narcotics appeared in 1897 in Queensland, largely as a response to the anti-Chinese sentiment surrounding opium smoking rather than as a harm-reduction measure.[5] These original laws prohibited the smoking and supply of raw opium but did not address control of medical opioids. In the following 10 years, the remaining states passed similar laws. In 1913, a Bill was passed in Victoria requiring a medical prescription for the supply of opioids, with other states soon following.[11]

The trend towards regulation soon turned towards criminalisation. With tighter regulation, profiteering from illegal markets increased, and international opinion supported changes aimed at more stringent control, particularly in the United States. The first international drug control treaty was created in The Hague in 1912, with Australia signing the following year.[12] The Hague International Opium Convention originally sought to control the international trade of opium and cocaine, but over time placed further restrictions on trade, manufacture and use of all narcotics and psychotropic drugs. At this time, there was a significant cultural shift around the use of opioid medications in the US, which had previously tolerated a free market for these substances, similar to Australia. By 1922, courts had interpreted the Harrison Narcotics Tax Act, passed by the US Congress in 1914, as meaning it was illegal to supply narcotics for people with opioid addiction. Around 25 000 physicians were charged under this legislation in the US, with 3000 serving prison sentences.[11]

These international influences significantly shaped Australia's policy on opioids. In 1927, New South Wales passed a Bill providing criminal sanctions against recreational narcotic use and supply. Despite such measures, use continued to grow, with increasing consumption of morphine and heroin nationally.[6]

A series of legislative acts in the US in the 1950s increased the severity of criminal sanctions for narcotic use and supply, ensuring prescribing of opioids only occurred in narrow, clearly justified circumstances.[13] This influence stretched to Australia, with public opinion favouring a criminal justice approach to the problem, leading to increasing numbers of arrests for opioid misuse and supply from 1960 to 1990.[11]

Conclusion

The history of morphine reflects its effects — of being able to provide great relief or cause significant harm. Despite remaining unchanged as a medication since its discovery, its uses and perception have changed considerably and have been profoundly affected by the legal and political climate in a manner unlike few, if any, other medications in Australia. The place of morphine in our society has been transformed from one of widely unregulated acceptability to decades of intense scrutiny governed by a legal and regulatory framework and increasing levels of public concern. Its uses extend beyond the scope of the medical sphere, as a device of recreation and habit, and also as an important source of legal export income — opioid production is worth about $100 million annually to the Australian economy.[1]

"The history of morphine reflects its effects — of being able to provide great relief or cause significant harm"

What the future holds for morphine is uncertain. The history of its use demonstrates the harms of poor regulation and, with a rising tide of deaths attributable to opioids in Australia and internationally, this appears to again be an increasing problem.[3] Yet to strictly control these medications, as was done in the mid 20th century, is not without its costs. Society has been adversely affected by the decision to persecute doctors and to not allow supervised access to these medications for patients with genuine pain. Government and media condemnation of opioid use has had a detrimental impact on the public perception of opioids, especially in oncology and treatment of terminal disease, where they may be needed most.[2]

The impact of the history of use, legal and political attention and media scrutiny appears to have had a significant effect on society's understanding of morphine. An understanding of the past may provide greater insight into the full effect of this evolving social history, enrich our clinical discussions and provide a discourse to guide future use.

Competing interests: Matthew Grant has previously worked as a pharmacovigilance physician at Merck Sharp & Dohme, but he has no ongoing relationship with the company.

Provenance: Not commissioned; externally peer reviewed.

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