

Contents

<i>List of contributors</i>	vii
<i>Preface</i>	ix
Part 1 Peripheral opioid receptors and cancer pain	
1 The analgesic role of peripheral opioid receptors <i>Catherine E Urch</i>	3
Part 2 Investigation and management of physical and non-physical pain	
2 The assessment and measurement of physical pain <i>Andrew Davies</i>	23
3 The nature of non-physical pain <i>Peter Speck</i>	29
Part 3 Evidence and opinion for opioid switching, co-analgesics and off-licence drugs	
4 Scientific evidence and expert clinical opinion for the utility of opioid switching <i>Giovambattista Zeppetella and Claire Bates</i>	39
5 Scientific evidence and expert clinical opinion for the use of co-analgesics <i>Matthew K Makin and Jennifer Smith</i>	57
6 Scientific evidence and expert clinical opinion for the use of off-licence agents <i>Sam Hjelmeland Ahmedzai, Mike Bennett and Colin Hardman</i>	71
Part 4 Clinical practice guidelines and medical error	
7 Appraisal of available guidelines for the management of cancer pain <i>Teresa Tate</i>	99
8 Understanding, minimising and managing clinical error <i>Mary Brennan and Rob George</i>	105
Part 5 The organisation of clinical services and the delivery of care	
9 Clinical governance and the management of cancer pain: implications and imperative for the organisation of cancer pain services <i>Anne Naysmith</i>	121
10 Developments in general practice and out-of-hours prescribing <i>Keri Thomas</i>	127

- 11 Increasing the effectiveness of intervention through multidisciplinary models of care: the nature of nurse-led intervention 141
Anne Lanceley

Part 6 Clinical education and the management of cancer pain

- 12 Improving the understanding and effectiveness of cancer pain management through educational intervention: what exactly constitutes adequate undergraduate knowledge and how can continuity be maintained through postgraduate education? 155
Bee Wee and Richard Hillier

- Index* 165

Scientific evidence and expert clinical opinion for the utility of opioid switching

Giovambattista Zeppetella and Claire Bates

Introduction

Pain in cancer patients is a complex problem with physical, social, psychological and spiritual dimensions. Physical pain is an important aspect of the total pain commonly experienced by cancer patients. Most patients with cancer pain will, however, respond to simple therapies. In 1986 the World Health Organization (WHO) published guidelines for cancer pain management based on the three-step analgesic ladder (WHO 1986). Since the WHO analgesic ladder was first proposed, there has been a wealth of clinical experience to support its use and studies have shown that adequate pain relief can be achieved in approximately 80% of patients (Hanks & Hawkins 2000).

The European Association for Palliative Care and the WHO recommend morphine as the opioid of choice for the management of moderate-to-severe pain (Expert Working Party of the European Association for Palliative Care 1996; WHO 1996). The dose of morphine should be titrated against the pain to achieve analgesia; a wide variation in mean daily dose has been reported (Boisvert & Cohen 1995). Morphine appears to have no clinically relevant ceiling effect to analgesia, but for some patients there may come a stage when further titration is made difficult because of unacceptable adverse effects. These adverse effects can include nausea, vomiting, sedation and hallucinations, which usually reduce within a few days, and constipation, which usually does not. It has been suggested that, for patients who appear unable to tolerate morphine, a switch to another opioid may be beneficial (Galer *et al.* 1992).

Opioids for moderate-to-severe pain

A number of alternatives to morphine are currently available and these include diamorphine, fentanyl, hydromorphone, oxycodone and methadone. The primary receptor binding for these drugs is shown in Table 4.1.

Morphine

Morphine, a potent μ agonist, was first isolated from the opium poppy in 1806 by the German pharmacist Frederich Sertürmer and its chemical structure determined in 1902. Morphine is now available in a wide range of formulations. After oral administration, the average bioavailability is 20–30%. Morphine is metabolised in

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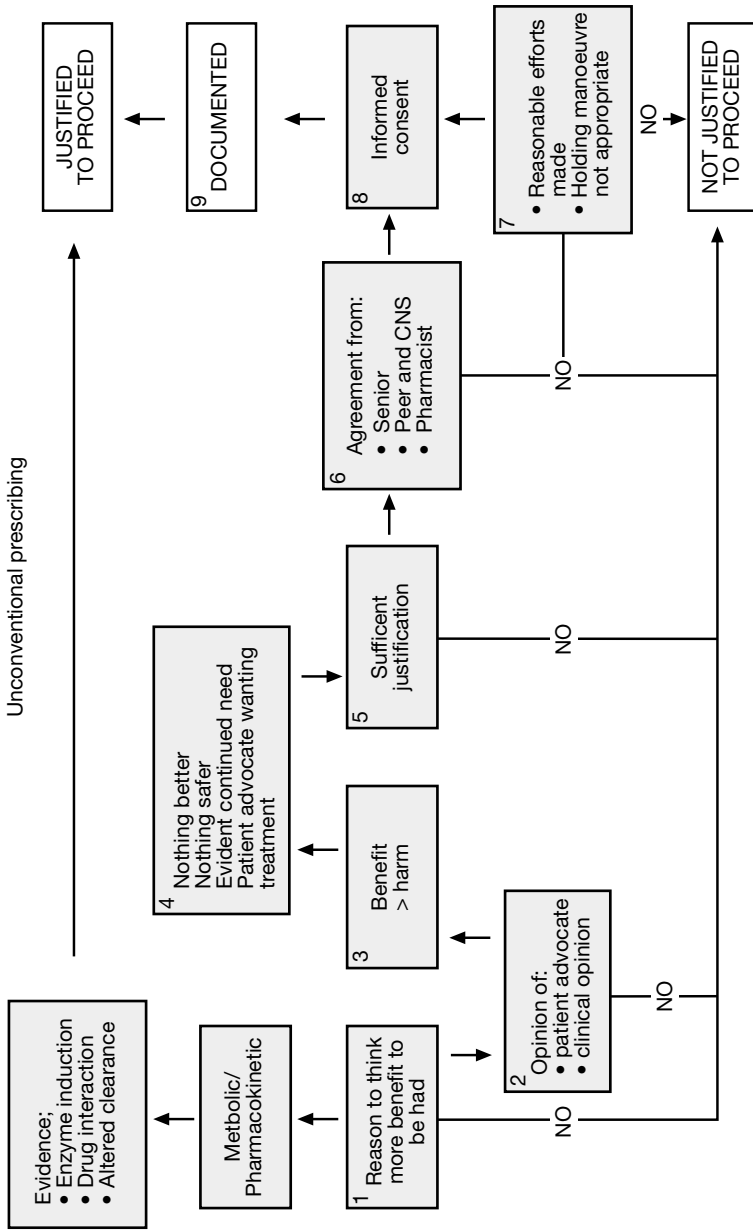


Figure 8.1 The algorithm is used in any situation where there is an unresolved clinical problem and where a drug option is under consideration. We start at point 1 (left-hand side in the middle) and may engage nine stages to justify or forbid our procedure to the next step. The purpose is to ensure that we have been sufficiently rigorous, that there is a chain of authority to consultant level and that we have fulfilled our duty to care by including our patient or the family in deliberations, and that the consenting process has been adequate.