

SUBLINGUAL ALFENTANIL FOR EARLY MOBILISATION IN HIP FRACTURE PATIENTS



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| TARGET AUDIENCE | Secondary Care |
| PATIENT GROUP | All acute patients following hip fracture surgery to enable early mobilisation in UHW trauma wards |

Clinical Guidelines Summary

- Early mobilisation after hip fracture surgery is associated with a reduction in 30 day mortality and complication rates compared to delayed mobilisation.
- Sublingual alfentanil has been established for use to provide rapid pain relief when a patient experiences pain during a physiotherapy session following hip surgery.
- Sublingual alfentanil for movement pain should be given approximately 5 minutes **before** first mobilisation or physiotherapy session.
- On subsequent physiotherapy sessions, sublingual alfentanil can be used for rapid pain control allowing the session to restart after 5 minutes.
- The duration of action of alfentanil is short (10-15 minutes) so must be given no more than 5 minutes before the physiotherapy.

Introduction

Alfentanil is a potent opioid with a rapid onset and short duration of action. The use of sublingual alfentanil is well-established in palliative care for episodic pain ¹. It has been established for use to provide rapid pain relief when a patient experiences pain during a physiotherapy session following hip surgery ². Early mobilisation after hip fracture surgery is associated with a reduction in 30 day mortality and complication rates compared to delayed mobilisation ³.

Use

- The onset of analgesia from alfentanil is very rapid (approximately 5 minutes).
- Sublingual alfentanil for movement pain should be given approximately 5 minutes **before** first mobilisation or physiotherapy session.
- On subsequent physiotherapy sessions, sublingual alfentanil can be used for rapid pain control allowing the session to restart after 5 minutes.
- The duration of action of alfentanil is short (10-15 minutes) so must be given no more than 5 minutes before the physiotherapy.
- Physiotherapist will liaise with nursing staff regarding timing for starting the physiotherapy with a patient.
- Nurse to draw up and administer alfentanil sublingually to the patient.
- Physiotherapy session to begin no more than 5 minutes following administration.

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Safety

- Alfentanil is a potent opioid and patients are at risk of respiratory depression.
- The patient will need to have a member of staff present from the moment of administration until the drug has worn off.
- This would normally be the physiotherapist but if the physiotherapist is required to leave, another member of staff will need to be present for 15 minutes after administration.
- Continuous pulse oximetry can be considered in patients deemed at high risk (significant respiratory comorbidities).

Prescription

- Alfentanil 200 micrograms sublingual 'to be given 5 minutes before 1st physiotherapy or for rapid pain control during subsequent physiotherapy sessions'.
- Can be reduced to 100 micrograms if patient deemed high risk (significant respiratory comorbidities).
- Part of HEPMA WG Hip Fracture bundle.

Administration

- The IV alfentanil preparation can be used sublingually (other sublingual versions exist) ².
- The concentration is 1mg/2ml (please check the concentration before drawing up)
 - 100 micrograms = draw up 0.2ml in a 1ml syringe
 - 200 micrograms = draw up 0.4ml in a 1ml syringe
 - Remove draw up needle and squirt under patient's tongue
- Observations should be the same as for any other parenteral opioid administration.
- If used concomitantly with another opioid, this should be given **before** sublingual alfentanil so that the alfentanil is not swallowed.
- Physiotherapy to begin within 5 minutes of administration.

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References/Evidence

1. Scottish Palliative Care Guidelines - Alfentanil (2019)
2. Scottish Hip Fracture Audit: Pain management in acute hip fracture. Scottish Hip Fracture Audit Steering Group (March 2023)
3. Agarwal N, Feng T, Maclullich A, Duckworth A, Clement N. Early mobilisation after hip fracture surgery is associated with improved patient outcomes: a systematic review and meta-analysis. *Musculoskeletal Care* 2024 22(1):e1863

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Appendices

1. Governance information for Guidance document

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| Lead Author(s): | Dr Kathryn Bennett |
| Endorsing Body: | ADTC |
| Version Number: | 1 |
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| Responsible Person (if different from lead author) | |

| CONSULTATION AND DISTRIBUTION RECORD | |
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| Consultation Process / Stakeholders: | Working group as listed above |
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