

## Orthogeriatrics—Clinical Summary Document

# Pain management in elderly fracture patients

The assessment and effective control of pain are crucial factors in the management of geriatric fracture patients to minimize physiological stress, reduce complications, and assure optimal condition for rehabilitation and recovery.

### Key points:

#### Poorly-controlled pain is common in geriatric patients

- Poorly-controlled pain in geriatric patients can lead to postoperative complications and cause functional decline.
- Standardized assessment using scales like the numerical rating scale (NRS), the verbal rating scale (VRS), or nonverbal rating scales (PAINAID) is necessary. The goals of treatment include comfort and improved function.
- In the perioperative period, opiates, early surgery, and early mobilization are the mainstays of treatment.

#### What are the consequences of poorly-controlled pain after a hip fracture?

Poorly-controlled pain has a significant impact on the clinical and functional outcomes of geriatric fracture patients and contributes to increased postoperative complications. Uncontrolled pain increases myocardial oxygen demand, promotes delirium, increases hospital length of stay, and can impair post operative recovery and rehabilitation. Undertreated or untreated pain is also associated with missed physical therapy sessions, delayed ambulation, and impaired functional recovery within the first six months following the fracture.

#### How can pain be assessed in elderly patients?

Underreporting of pain is a common problem among elderly patients. The reasons for difficulties in the assessment of pain in the elderly include:

- Communication problems (eg, hearing or language)
- Altered mental status (delirium)
- Poorly described symptoms
- Cognitive impairment

Therefore, a standardized assessment adapted to the needs of this patient group is very helpful. To avoid inadequate pain management, the use of a standardized pain assessment is important. For patients with preserved cognitive and language functions, numerical or verbal rating scales can be used. For patients with significantly impaired cognitive function, nonverbal scales (eg, PAINAID) or other clinical clues must be sought. Self-assessment can also be used in patients with mild to moderate cognitive dysfunction. Patients with severe dementia should be assessed by the use of specific indicators such as vocalization, facial expression, and body language. See Figure 1 for examples of validated pain scales.

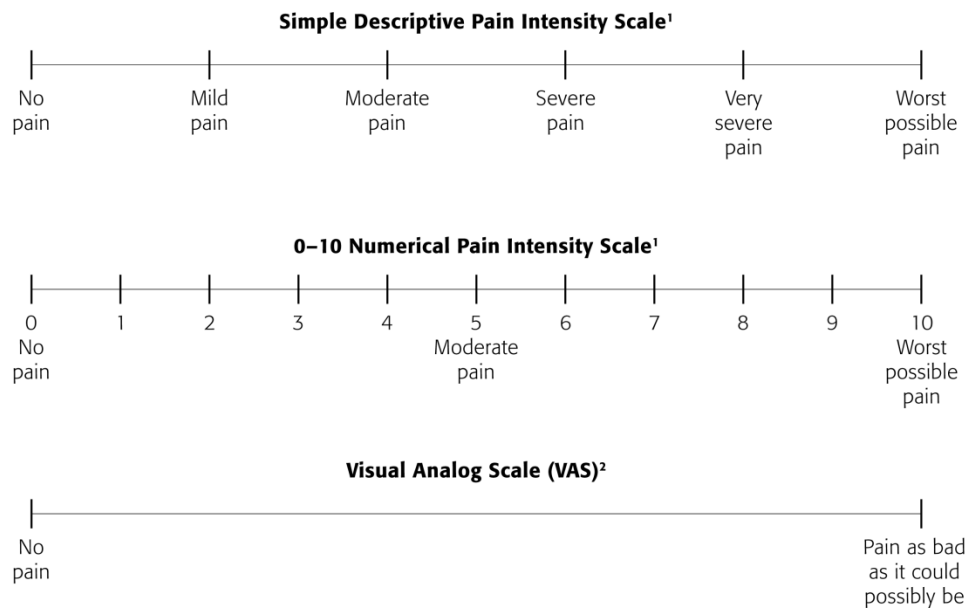


Figure 1: Simple descriptive pain intensity scales

Assessment should be repeated throughout the day, at rest and with activity, and before and 1 hour after administration of the pain medication. It should be performed by every member of the orthogeriatric team. Pain intensity, as well as functional distress caused by the pain, must be assessed.

### How to manage pre/postoperative pain in the elderly?

In the preoperative period, intravenous opiates (morphine 2–4 mg intravenously as needed) and early surgery are the most important contributors to pain control. Local nerve blocks (femoral nerve blocks) can also be helpful in achieving rapid pain control and minimizing opiate needs. During the postoperative period, adequate pain control can often be achieved with routine scheduled administration of acetaminophen (paracetamol) and "as needed" dosing of oral opiates (starting doses: oxycodone 2.5–5 mg every 3 hours as needed; larger doses for healthy and robust patients). Doses will depend on patient comorbidities and frailty. Nonsteroidal medication should be avoided due to gastrointestinal, renal, and cardiovascular side effects.

Routine constipation prophylaxis (eg, polyethylene glycol, senna) should be given to every patient without contraindications receiving opioids. Repeat pain assessment after opioid administration to evaluate effectiveness and side effects is essential.

### Recommended reading

**Friedman SM, Mendelson DA, Kates S L, McCann RM** Geriatric co-management of proximal femur fractures: total quality management and protocol-driven care result in better outcomes for a frail patient population. *J Am Geriatr Soc.* 2008 Jul;56(7):1349–1356..

**Morrison RS, Magaziner J, Gilbert M, et al.** Relationship between pain and opioid analgesics on the development of delirium following hip fracture. *J Gerontol A Biol Sci Med Sci.* 2003 Jan;58(1):76–81.

**Parker MJ, Griffiths R, Appadu B.** Nerve blocks (subcostal, lateral cutaneous, femoral, triple, psoas) for hip fractures. *Cochrane Database Syst Rev.* 2002;(1):CD001159.

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