Pain Management Interventions for Elderly Patients With Hip Fracture

Key Clinical Issue
What are the comparative effectiveness, benefits, and adverse events associated with interventions for acute-pain management, as compared to usual care, in elderly patients with hip fractures from low-impact injury?

Conclusions
Overall, there is limited evidence about the comparative effectiveness, benefits, and adverse events of pain management interventions used for elderly patients with hip fracture. For systemic analgesics and several other modalities, studies are too limited to permit conclusions about optimal regimens. There is moderate strength of evidence that nerve blocks reduce pain and the incidence of delirium, and evidence of low strength indicates that preoperative traction does not improve relief from acute pain. For all modalities, the evidence is generally inadequate to estimate harms and the incidence of adverse events.
Additional studies are needed to examine the comparative effectiveness of approaches to pain management in elderly patients with hip fracture. The systematic review revealed areas where evidence is limited or absent, including:

- Knowledge is very limited about the benefits and adverse events associated with pain management approaches in the long term (beyond 30 days).
- Applicability of current studies is limited, as patients in institutional settings and those with cognitive impairment were rarely represented.
- How rehabilitation techniques may affect either acute or chronic pain is unexplored.
- Studies did not report how nerve blocks with both sensory and motor effects may affect rehabilitation, ambulation, or mobility.
- Multicenter research studies are needed that are large enough for statistical analysis of subgroups (by age, gender, comorbidities, or prefracture functional status) and for detection of adverse effects.

### Timing of Use of Pain Management Interventions

This table summarizes the various treatment options examined in the systematic review upon which this guide is based, including the numbers of studies, and the timings of the interventions studied relative to surgery.

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Number of Studies</th>
<th>Timing Used in Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systemic Analgesia</td>
<td>3</td>
<td>Pre- and postoperative</td>
</tr>
<tr>
<td>Anesthesia</td>
<td>30</td>
<td>Intraoperative</td>
</tr>
<tr>
<td>Nerve Blocks</td>
<td>32</td>
<td>Pre-, intra-, and postoperative</td>
</tr>
<tr>
<td>Traction</td>
<td>11</td>
<td>Preoperative</td>
</tr>
<tr>
<td>Transcutaneous Electrical Neurostimulation (TENS)</td>
<td>2</td>
<td>Pre- and postoperative</td>
</tr>
<tr>
<td>Acupressure; Relaxation Techniques</td>
<td>2</td>
<td>Preoperative</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>1</td>
<td>Postoperative</td>
</tr>
<tr>
<td>Multimodal Pain Management</td>
<td>2</td>
<td>Pre- and postoperative</td>
</tr>
</tbody>
</table>

### Gaps in Knowledge

**What To Discuss With Your Patients or Their Caregivers**

Clinicians who wish to engage in shared decisionmaking can communicate the critical evidence on effectiveness, benefits, and adverse events to patients and their caregivers, while exploring the patients’ values and preferences and encouraging them to be involved in their own care.

- Managing pain during the period from injury through rehabilitation is important for advancing return to function and improvement in quality of life.
- There are options for pain management that may be suitable for patients with a variety of comorbidities.
- There is limited evidence about the benefits and adverse events of pain-control interventions when they are used for elderly patients with hip fractures.

### Resource for Patients

*Managing Pain From a Broken Hip, A Guide for Adults and Their Caregivers* is a free companion to this clinician guide. It covers:

- The importance of pain management during treatment for and recovery from a broken hip.
- A description of the options that are available for patients with a broken hip.
- The evidence about benefits and risks of the various pain-control interventions that may be used for an elderly patient with a broken hip.

### Ordering Information

For electronic copies of *Managing Pain From a Broken Hip, A Guide for Adults and Their Caregivers*, this clinician guide, and the full systematic review, visit www.effectivehealthcare.ahrq.gov/hippain.cfm. To order free print copies, call the AHRQ Publications Clearinghouse at 800-358-9295.

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The information in this summary is based on *Pain Management Interventions for Hip Fracture, Comparative Effectiveness Review No. 30*, prepared by the University of Alberta Evidence-based Practice Center under Contract No. 290-02-0023 for the Agency for Healthcare Research and Quality, April 2011. Available at: www.effectivehealthcare.ahrq.gov/hippain.cfm. This summary was prepared by the John M. Eisenberg Center for Clinical Decisions and Communications Science at Baylor College of Medicine, Houston, TX.