Assessment and Management of Pain in Older Persons

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Importance

- **Incidence**
  - 25 - 50% of community dwelling older people
  - 45 - 80% of nursing home residents

- **Relevance**
  - Decreased mobility and function
  - Depression and anxiety
  - Sleep disturbance
  - Decreased socialization and quality of life
  - Higher incidence of iatrogenic events
  - Increased health care utilization and costs
Learning Objectives

1. Understand the biopsychosocial model of persistent pain and its particular relevance to older persons.

2. Appreciate the importance and process of a thorough pain assessment in the elderly.

3. Understand the breadth of medical, physical and psychological pain management options available and their particular application to older persons.
What is Pain?
IASP Definition of Pain

“An unpleasant sensory and emotional experience associated with actual or potential tissue damage

or

is described in terms of such damage”
Pain is a multidimensional subjective experience whose perception is influenced by cognitive, behavioral, environmental and cultural factors and whose presence cannot be validated or objectively measured.
The Biopsychosocial Model of Pain
Thoughts and Emotions

The Wheels of Life
Suffering and Pain Behavior

- **Suffering**
  - The global impairment of quality of life due to a combination of pain, decreased function and various psychosocial factors.

- **Pain behavior**
  - The actions that communicate pain; the individual’s outward expression of the entire pain experience.

*I don’t mind pain as long as it doesn’t hurt.*

Oscar Wilde
Outside Environment
The Physical and Psychological Manifestations of Chronic Pain

Rheumatology 2003;42:1133-1137
Assessment of Pain in Older Persons

- Acute vs. Persistent (Chronic) Pain
  - Acute or acute on chronic pain requires an even more thorough medical assessment.
  - The incidence of potentially serious causes of acute pain increases with age.
- “Red Flags” for serious back conditions
  - Age > 50 years
“Red Flags” for Serious Back Conditions

- Age > 50
- History of osteoporosis
- Previous cancer history
- Immunosuppression
- Corticosteroid use
- Unexplained weight loss
Non-spinal Causes of Back Pain

- Pancreatitis
- Pancreatic Cancer
- Kidney Stones
- Aortic Aneurysm
- Retroperitoneal processes
  - Psoas abscess
  - Retroperitoneal hematoma
Persistent or Chronic Pain
the Biopsychosocial Approach

- The biologic component
  - For many persistent pain conditions an exact pathoanatomic diagnosis is not possible.
    - Irrelevant degenerative changes on imaging studies
    - Sensitization – Peripheral and Central
  - Mechanistic Classification

Types of Pain
Mechanistic Classification

- nociceptive
  - somatic
  - visceral
- mixed
- neuropathic
  - central / peripheral nervous system
Common Causes of Pain in the Older Patient

- Arthritis particularly OA
- Other degenerative musculoskeletal conditions
- Neuropathic pain
  - Diabetic neuropathy, radiculopathy and post herpetic neuralgia
- Osteoporosis → fractures
- Peripheral vascular disease
- Immobility/contractures
Clinical Diagnosis

- History and Physical Exam key
  - History: character, pattern of pain
  - Physical Exam: sensory changes (allodynia, hyperalgesia), trigger points

- Neuropathic Pain Questionnaires
  - DN4, LANNS, Pain Detect

- Investigations often not helpful
  - MRI: not particularly specific or sensitive
  - EMG/NCS: only assesses large myelinated NF
It is also extremely important to ask about …

- Sleep disturbance
- Mood disturbance
  - Depression
  - Anxiety
  - Demoralization
- Other psychosocial factors
Barriers to Pain Assessment in Older Persons

- Reluctance to report
  - Expect pain with aging
  - Fear of tests/procedures, addiction to medication, and possible cause of pain
  - Depression, anxiety, guilt

- Inability to report
  - Cognitive and sensory impairment
<table>
<thead>
<tr>
<th>Pain Observation Scale</th>
<th>Target Population</th>
<th>No. of Items</th>
<th>Categories*</th>
<th>Response Category</th>
<th>Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facial Activity Coding System (FACS)</td>
<td>Cognitively impaired (older) adults</td>
<td>46</td>
<td>1</td>
<td>Frequency and intensity</td>
<td>—</td>
</tr>
<tr>
<td>Pain Behavior Method (PBM)</td>
<td>Cognitively impaired (older) adults</td>
<td>5</td>
<td>1, 2, 4</td>
<td>Presence or absence</td>
<td>0–5</td>
</tr>
<tr>
<td>Discomfort Scale—Dementia of Alzheimer Type (DS-DAT)</td>
<td>Alzheimer patients</td>
<td>9</td>
<td>1, 2, 4, 6</td>
<td>4-point scale</td>
<td>0–27</td>
</tr>
<tr>
<td>DOLOPLUS2</td>
<td>Nonverbal or cognitively impaired older adults</td>
<td>10</td>
<td>1, 2, 3, 4, 5</td>
<td>4-point scale</td>
<td>0–30</td>
</tr>
<tr>
<td>Behavior Checklist</td>
<td>Cognitively impaired older adults</td>
<td>20</td>
<td>2, 3, 4, 5, 6</td>
<td>Presence or absence</td>
<td>—</td>
</tr>
<tr>
<td>Checklist of Nonverbal Pain Indicators (CNPI)</td>
<td>Cognitively impaired older adults</td>
<td>6</td>
<td>1, 2, 3, 4</td>
<td>Presence or absence</td>
<td>0–6</td>
</tr>
<tr>
<td>Assessment for Discomfort in Dementia (ADD)</td>
<td>Patients with moderate to severe dementia</td>
<td>5</td>
<td>1, 2, 3, 4, 5, 6</td>
<td>Presence or absence</td>
<td>—</td>
</tr>
<tr>
<td>Pain Assessment in Advanced Dementia (PAINAD)</td>
<td>Patients with (severe) dementia</td>
<td>5</td>
<td>1, 2, 3, 4, 6</td>
<td>3-point scale</td>
<td>0–10</td>
</tr>
<tr>
<td>Pain Assessment Tool in Confused Older Adults (PATCOA)</td>
<td>Confused older adults</td>
<td>9</td>
<td>1, 2, 4</td>
<td>Presence or absence</td>
<td>0–9</td>
</tr>
<tr>
<td>Pain Assessment for the Dementing Elderly (PADE)</td>
<td>Patients with dementia</td>
<td>24</td>
<td>1, 2, 3, 4, 5, 6</td>
<td>4-point scale and multiple choice</td>
<td>24–96</td>
</tr>
<tr>
<td>Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC)</td>
<td>Seniors with a limited ability to communicate</td>
<td>60</td>
<td>1, 2, 3, 4, 5, 6</td>
<td>Presence or absence</td>
<td>0–60</td>
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<tr>
<td>Non-Communicative Patient’s Pain Assessment Instrument (NOPPAIN)</td>
<td>Noncommunicative patients</td>
<td>17</td>
<td>1, 2, 3, 4, 5</td>
<td>6-point scale</td>
<td>0–30</td>
</tr>
<tr>
<td>Abbey Pain Scale</td>
<td>Patients with end-stage dementia</td>
<td>6</td>
<td>1, 2, 3, 4, 5, 6</td>
<td>4-point scale</td>
<td>0–18</td>
</tr>
</tbody>
</table>

Note. *1 = facial expression; 2 = motor behavior; 3 = social behavior or mood; 4 = vocalization; 5 = eat or sleep pattern; 6 = physiological indicators.

Figure 1.

### A Pain Assessment Tool for People With Advanced Alzheimer’s and Other Progressive Dementias

Lane, Patricia; BSN, RNC; Kuntupis, Marilyn; RNC, MDS; MacDonald, Sally; McCarthy, Patricia; Panke, Jo; Ann BSN, RNC; Warden, Victoria; Volicer, Ladislav; MD, PhD


**Figure 1. Pain Assessment IN Advanced Dementia (PAINAD) Scale**

<table>
<thead>
<tr>
<th>Score</th>
<th>Breath, independent of vocalization</th>
<th>Negative vocalization</th>
<th>Facial expression</th>
<th>Body language</th>
<th>Consolability</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Normal</td>
<td>None</td>
<td>Smiling, or</td>
<td>Relaxed</td>
<td>No need to</td>
</tr>
<tr>
<td></td>
<td>Occasional labored breathing. Short period of hyperventilation.</td>
<td>Occasional moan or groan. Low level speech with a negative or disapproving quality.</td>
<td>inexpressive</td>
<td>Tense. Distressed pacing. Fidgeting.</td>
<td>Distracted or reassured by voice or touch.</td>
</tr>
</tbody>
</table>

Facial Grimace Scale

The scale has been developed to assess pain in adults who are cognitively impaired and are unable to communicate using the other tools.

- Caregivers or clinicians can rate pain based on patient’s facial expression.
- Clients/patients who can understand this scale can use it also.

0  no pain  2  mild  4  discomforting  6  distressing  8  horrible  10  excruciating

Adapted with permission from Grey Bruce Palliative Care/Hospice Association Manual Guidelines for Developing a Pain Management Program. 2000; 2nd edition
It is a continuum scale that provides a visual alternative to the Numeric Rating Scale (NRS).

It should be explained to patients as follows: the light coloured area at the bottom is no pain at all and the dark red colour at the top is the worst pain imaginable.

Ask the patient to point to the part of the scale that best describes their pain at rest “R” and with activity “A”.

Document the score.
Also important to assess …

- Function
  - Brief Pain Inventory
  - Pain Disability Index

- Mood
  - Beck Depression Inventory
  - Profile of Mood States

- Quality of Life
  - SF36
Persistent Pain is …

- Complex
- Multidimensional
- Often equally influenced by biologic and psychosocial factors
- Best assessed and managed with a comprehensive multidisciplinary approach in mind
Managing Chronic Pain

- Medical Therapy
- Physical Therapy
- Mindfulness Therapy
Medical Therapy

- Requires a thorough clinical assessment
- Pharmacotherapy
  - Rational and directed prescription of medications for pain and associated symptoms
- Interventional pain management
- Educate and encourage self-management
Pharmacologic Management

- Management of the pain
  - Nociceptive
  - Neuropathic
  - Severity – VAS, function

- Management of associated symptoms
  - Sleep disturbance: low dose TCA’s
  - Depression: SSRI’s
  - Anxiety: avoid benzo’s
Nociceptive Pain

WHO Analgesic Ladder

Freedom from cancer pain

Step 3
- Opioid for moderate-to-severe pain
- ± Nonopioid
- ± Adjuvant

Step 2
- Opioid for mild-to-moderate pain
- ± Nonopioid
- ± Adjuvant

Step 1
- Nonopioid
- ± Adjuvant

Pain

Source: Journal of Hospice & Palliative Nursing © 2003 Lippincott Williams & Wilkins
Fig. 3: Algorithm for the Management of Neuropathic Pain in Primary Care

Consider nonpharmacologic treatments (e.g., physiotherapy, psychological interventions) and, in some cases, early referral for nerve blocks to facilitate rehabilitation (e.g., complex regional pain syndrome).

If postherpetic neuralgia or focal neuropathy, initiate topical lidocaine treatment.

- Ineffective, partial response or other diagnosis

Initiate first-line drug monotherapy (gabapentin or pregabalin OR tricyclic antidepressant [TCA] or serotonin-norepinephrine reuptake inhibitor [SNRI]).

- Ineffective or not tolerated
- Partial treatment response

Switch to alternate first-line drug monotherapy (TCA or SNRI OR gabapentin or pregabalin).

- Ineffective or not tolerated
- Initiate monotherapy with tramadol or opioid analgesic

Consider adding alternate first-line drug (TCA or SNRI OR gabapentin or pregabalin).

- Partial treatment response
- Consider adding tramadol or opioid analgesic

Refer patient to pain specialty clinic for consideration of third-line drugs, interventional treatments and pain rehabilitation programs.

Gilron, I. et al. CMAJ 2006;175:265-275
Pharmacokinetic Considerations in the Elderly

- Higher fat to lean body mass ratio
- Reduced serum protein
- Reduced renal GFR, tubular reabsorption and creatinine clearance
- Reduced hepatic function
- Reduced first pass gut metabolism
Pharmacokinetic Implications

- Dosage reduction
- Slower dosage adjustment
- Higher likelihood of side effects
  - Increased sensitivity to drugs acting on the central nervous system
- Greater potential for serious adverse events
- Drug interactions (polypharmacy)
Interventional Pain Management

- Trigger point injections
- Botulinum toxin injections
- Joint/periarticular injections
- Nerve blocks
  - Peripheral and Sympathetic
- Epidural/intrathecal infusions
- Neuroablative procedures
- Spinal cord/brain stimulation
- Vertebroplasty/Kyphoplasty
Botulinum Toxin Injections
Subacromial Steroid Injection
Epidural Steroid Injections

Interlaminar/Direct

Caudal

Transforaminal
Facet Joint Neurotomy
Interventional Procedures

- Evidence base – depends on source
- ACC of NZ Interventional Pain Management Guidelines
  - Medium quality evidence for:
    - Epidural steroids for short term relief of radicular pain
    - Medial branch blocks for investigation of low back pain
  - Conflicting evidence for:
    - Lumbar medial branch radiofrequency neurotomy
  - No evidence for:
    - Lumbar facet joint steroid injections
    - “Paravertebral blocks”
Vertebroplasty/Kyphoplasty

Vertebroplasty

Kyphoplasty

1-Fractured Vertebra
2-Insert Instrument
3-Inflate Balloon Tamp
4-Fill with a "support cast"
Physical Therapy/Rehab

- Physiotherapy
  - Individualized exercise programs
  - Passive physical modalities indicated to provide temporary pain relief and facilitate exercises initially but not as long-term maintenance therapy

- Occupational Therapy
  - Pacing, ergonomics/positioning, activities of daily living modification and devices

- Passive physical treatments
  - Massage, acupuncture and chiropractic
  - Same as for physical modalities

- Educate and encourage self-management
Strength and Aerobic Conditioning Exercise for OA

- Exercise moderately reduces pain and has a small effect on self-reported disability in elderly patients with OA.
Hydrotherapy

- Two RCT’s for CLBP with both finding no difference between hydrotherapy and control treatment
  - McIveen & Roberston compared to wait list
  - Sjorgren et al. compared to land based exercise
Tai Chi

- Studies in older adults have shown improvements in balance, strength, functional mobility, flexibility, psychological well being and disturbed sleep.
Mindfulness Therapy

- Cognitive Behavioral Therapy (CBT)
- Acceptance and Commitment Therapy (ACT)
- Operant conditioning
- Pain coping strategies
  - Relaxation techniques, biofeedback, hypnosis, imagery
- Counseling for associated affective disorders
- Educate and encourage self-management
Recreation Therapy

Senior’s Association
Hildegarde Centre
TEAM WORK
Multidisciplinary Pain Programs

There is Level I(a) evidence supporting MPP in terms of:

- Improved function: 43 – 65% increase
- Decreased pain intensity: 37% decrease
- Decreased health care utilization: 33 – 66% decrease
- Decreased analgesic use: 63% decrease
Practical Suggestions

- Focus on a particular aspect of assessment/management at each visit
- Utilize resources in the community to piece together a multi-disciplinary treatment plan
  - YPEP Program
  - Arthritis Society
  - Adult Day Hospital and physio consult service at SMOL
  - Mindfulness Based Chronic Pain Program
  - Chronic Pain Service at SMOL
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References