PAIN MANAGEMENT IN OLDER PERSONS

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DISCLOSURES

- Unrestricted education grant: Sanofi-Aventis
- Speakers honoraria: Schering-Plough, Sanofi-Aventis, Pfizer, Purdue
- Consulting projects: Ontario MOHLTC, Atlantic Region Ministries of Health and Education, CIDA Inc, Ministries of Health Malaysia and Kerala India
LEARNING OBJECTIVES

- Discuss the current state of pain management in older persons
- Address changes in brain morphology with aging and chronic pain
- Describe the consequences of pain in older persons such as depression, loss of independence and reduced quality of life
- Assess pain in older persons with cognitive or communication impairment
- Developing a pain management plan
YOUNG CHILDREN AND OLDER PEOPLE AS A PERCENTAGE OF GLOBAL POPULATION

Pain is a common problem encountered among elderly people in sub acute and long-term facilities. Pain is often underestimated and under treated in these settings. Ferrell, BA. Clinics in Geriatrics Medicine. 16(4):853-74, 2000 November.

EPIDEMOLOGY OF PAIN IN OLDER PERSONS

- Chronic Pain is a complex problem with both clinical and psychological implications.
- Chronic pain affects 20% of Canadians and jumps to 60% of those over 65. Chronic Pain in Canada: Prevalence, Treatment. Impact and Role of Opioid Analgesia, Moulin, D et al., Pain Research and Management, 2002. 7:179-84.
- Epidemiologic studies show a very high prevalence of persistence pain, often exceeding 50% of community dwelling older patients and up to 80% of nursing home resident. Gibson, SJ, Expert Review of Neurotherapeutics. 7(6): 627-35, 2007 June.
Epidemiology of Pain in Older Persons

- Older patients tend to underreport pain.
- Impaired quality of life secondary to pain may be expressed by depression, anxiety, sleep disruption, appetite disturbance and weight loss, cognitive impairment, and limitation in the performance of daily activities. These burdens are expected to improve with effective pain management (AGS Panel 2002).
Epidemiology of Pain in Older Persons


- The impact of poorly managed chronic pain on the quality of life of elderly patients and the problems related to its management are widely acknowledged. Auret K et al. Drugs and Aging. 22(8): 641-54, 2005.
PAIN IN OLDER PERSONS

MYTHS

- Acknowledging pain will lead to loss of independence
- The elderly - especially cognitively impaired - have a higher pain tolerance
- The cognitively impaired cannot be accurately assessed for pain
- Patients in LTC say they are in pain to get attention
- Elderly patients are likely to become addicted to pain medications
INADEQUATE PAIN TREATMENT IN OLDER PERSONS

- Consequences of untreated pain
  - Depression/social isolation
  - Suffering
  - Sleep disturbance
  - Behavioral problems
  - Anorexia, weight loss
  - Deconditioning, increased falls
CHANGES WITH ADVANCING AGE

- Decreased opiate receptors (Hess et al., 1981; Messing et al., 1980).
- Decreased efficacy of opiates mediating antinociception (Crisp et al., 1994; Jourdan et al., 2002).
- Reduction in myelinated and unmyelinated fibers in peripheral nerves (Ceballos et al., 1999).
- Diminished expression of CGRP, substance P, somatostatin and nitric oxide (Ko et al., 1997).
Changes with Advancing Age

- Decreased levels of 5-HT and NE in dorsal horn and increased c-fos (Iwata et al., 1995; 2002).
“Normal” Aging: Changes in Brain Morphology

- Atrophy of prefrontal gray matter
  - Raz et al, Cerebral Cortex 1997; 7: 268
- Atrophy of thalamus
  - Van Der Werf et al, Cog Brain Res 2001; 11: 377
- Diminished frontal white matter integrity
  - Pfefferbaum et al, NeuroImage 2005
Older Adults with Disabling vs. Non-disabled CLBP
Pain is associated with WM damage over and above that associated with aging.

Chronic non-malignant pain is associated with alterations in brain morphology in older adults, above and beyond those associated with normal aging.

Understanding what biologically drives subjective pain-associated disability may open the door to newly targeted treatments.
Chronic Pain is Poorly Managed

- Only 36% of patients felt their pain was very effectively treated
- 32% of MDs thought chronic pain was effectively treated
- 45% of people with moderate to severe chronic pain were not taking any prescription medication

SES Canadian Pain Survey 2007.
Potential Interactions Influencing Pain Sensation

HPA-Axis

Immune Function

AGE

Sex

Autonomic Function

Psycho-Social Genetic
AMDA PAIN MANAGEMENT GUIDELINES 2009

- Recognition
- Assessment
- Treatment
- Monitoring
AMDA CPG: RECOGNITION

- Is pain present
- Has characteristics and causes of pain been adequately defined
- Has appropriate treatment for pain been addressed
PAIN IN OLDER PERSONS
RECOGNITION

Non-specific signs and symptoms suggestive of pain:

- Frowning, grimacing, fearful facial expressions, grinding of teeth
- Bracing, guarding, rubbing
- Fidgeting, increasing or recurring restlessness
- Striking out, increasing or recurring agitation
- Eating or sleeping poorly
Pain Assessment Tools in Cognitively Impaired

Abbey Scale, CNPI

DS-DAT, DOLOPUS-2

NOPAIN, PACE, PAI NAD, PATCOA

PACSLAC, PADE, Simmons and Malabar
KEY COMPONENTS OF PAIN ASSESSMENT

- **Measurement of Pain:**
  - Using standardized scales in a format that is accessible to the individual.

- **Cause of Pain:**
  - Examination and investigation to establish the cause of pain.
<table>
<thead>
<tr>
<th>Type of Pain assessment</th>
<th>Practical Suggestions for Scale Selection</th>
<th>Comments and References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older people with no significant cognitive/communication impairment and Older people with mild to moderate cognitive/communication impairment</td>
<td>Numeric graphic rating scale. Verbal rating scale. Numerical rating scale (0-10)</td>
<td>High validity and reliability in older people. Can be used in mild/moderate cognitive impairment. Vertical as opposed to horizontal orientation may help to avoid misinterpretation in the presence of visuo-spatial neglect, e.g. in patients with stroke.</td>
</tr>
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</tbody>
</table>
| Older people with moderate to severe cognitive/communication impairment | Pain Thermometer  
Colored Visual Analogue Scale | Easy to use  
Validity has not been fully evaluated  
Well understood in early and mid-stage state of Alzheimer’s disease |
<table>
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<th>Type of Pain assessment</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Observational pain assessment</td>
<td>Abbey pain Scale</td>
<td>Short and easy to apply scale. Requires more detailed evaluation.</td>
</tr>
<tr>
<td>Older people with severe cognitive/communication impairment (no single recommendation currently possible)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multidimensional assessment</td>
<td>Brief Pain Inventory</td>
<td>15-item scale assessing: severity, impact on daily living, impact on mood and enjoyment of life.</td>
</tr>
<tr>
<td>Older people with minimal cognitive impairment</td>
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# Observational Changes Associated with Pain

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomic Changes</td>
<td>Pallor, sweating, tachypnoea, altered breathing patterns, tachycardia, hypertension.</td>
</tr>
<tr>
<td>Facial Expressions</td>
<td>Grimacing, wincing, frowning, rapid blinking, brow raising, brow lowering, cheek raising, eyelid tightening, nose wrinkling, lip corner pulling, chin raising, lip puckering.</td>
</tr>
<tr>
<td>Body Movements</td>
<td>Altered gait, pacing, rocking, hand wringing, repetitive movements, increased tone, guarding, <em>bracing</em></td>
</tr>
</tbody>
</table>
# Observed Changes Associated with Pain Cont’d:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbalisations/vocalisations</td>
<td>Sighing, grunting, groaning, moaning, screaming, calling out, aggressive/offensive speech</td>
</tr>
<tr>
<td>Interpersonal interactions</td>
<td>Aggression, withdrawal, resisting</td>
</tr>
<tr>
<td>Changes in activity patterns</td>
<td>Wandering, altered sleep, altered rest patterns</td>
</tr>
<tr>
<td>Mental status changes</td>
<td>Confusion, crying, distress, irritability.</td>
</tr>
</tbody>
</table>
Appendix 4. Examples of pain scales

4A Numeric rating scale

The Numeric Graphic Rating Scale (NGRS)

<table>
<thead>
<tr>
<th>10</th>
<th>Most severe pain imaginable</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td></td>
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<tr>
<td>8</td>
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<td>7</td>
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<td></td>
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<tr>
<td>2</td>
<td></td>
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<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>No pain at all</td>
</tr>
</tbody>
</table>

Say to the patient:
- This is a scale to measure pain.
- 0 indicates 'no pain at all'.
- The numbers on the scale indicate increasing levels of pain, up to 10 which is the most severe pain imaginable.
- Which point on the scale shows how much pain you have today?

To the administrator:
In your opinion was the person able to understand this scale?

Yes ☐ No ☐

Comment:

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4B Verbal descriptor rating scale (5 points)

‘How severe is your pain today?’

☐ None
☐ Mild
☐ Moderate
☐ Severe
☐ Very severe
The Abbey Pain Scale
For measurement of pain in people with dementia who cannot verbalise

How to use scale: While observing the resident, score questions 1 to 6.
Name of resident: .................................................................................................................................
Name and designation of person completing the scale: ...........................................................................
Date: .............................................................................................................................. Time: ..........................................................................................................................
Latest pain relief given was ........................................................................................................ at .......hrs.

Q1. Vocalisation
  eg whimpering, groaning, crying
  Absent 0  Mild 1  Moderate 2  Severe 3

Q2. Facial expression
  eg looking tense, frowning, grimacing, looking frightened
  Absent 0  Mild 1  Moderate 2  Severe 3

Q3. Change in body language
  eg fidgeting, rocking, guarding part of body, withdrawn
  Absent 0  Mild 1  Moderate 2  Severe 3

Q4. Behavioural change
  eg increased confusion, refusing to eat, alteration in usual patterns
  Absent 0  Mild 1  Moderate 2  Severe 3

Q5. Physiological change
  eg temperature, pulse or blood pressure outside normal limits, perspiring, flushing or pallor
  Absent 0  Mild 1  Moderate 2  Severe 3

Q6. Physical changes
  eg skin tears, pressure areas, arthritis, contractures, previous injuries
  Absent 0  Mild 1  Moderate 2  Severe 3

Add scores for Q1 to Q6 and record here ..........................................................................................................................

Total pain score

Now tick the box that matches the Total pain score

0–2  3–7  8–13  14+
No pain Mild Moderate Severe

Finally, tick the box which matches the type of pain

Chronic Acute Acute on chronic

(This document may be reproduced with this reference retained.)
Use of the Abbey Pain Scale

- The Abbey Pain Scale is the best used as part of an overall pain management plan.

Objective:
- The Pain Scale is an instrument designed to assist in the assessment of pain in residents who are unable to clearly articulate their needs.

Ongoing Assessment:
- The Scale does not differentiate between distress and pain, so measuring the effectiveness of pain-relieving interventions is essential.
- Recent work by the Australian Pain Society recommends that the Abbey Pain Scale be used as a movement-based assessment. The staff recording the scale should therefore observe the resident while they are being moved, e.g. during pressure area care, while showering, etc.
Use of the Abbey Pain Scale cont’d:

Ongoing assessment:

- Complete the scale immediately following the procedure and record the results in the resident’s notes. Include the time of completion of the scale, the score, staff member’s signature and action (if any) taken in response to results of the assessment, e.g. pain medication or other therapies.

- A second evaluation should be conducted one hour after any intervention taken in response to the first assessment, to determine the effectiveness of any pain-relieving intervention.
Use of the Abbey Pain Scale

Lastly... If, at this assessment, the score on the pain scale is the same, or worse, consider further intervention and act as appropriate. Complete the pain scale hourly, until the resident appears comfortable, then four-hourly for 24 hours, treating pain if it recurs. Record all the pain relieving interventions undertaken.

If pain/distress persists, undertake a comprehensive assessment of all facets of resident’s care and monitor closely over a 24-hour period, including any further intervention undertaken. If there is no improvement during that time, notify the medical practitioner of the pain scores and the action’s taken.

Appendix 2. Algorithm for the assessment of pain in older people

Can the person communicate successfully?*

Yes

Ask whether the person has pain at rest or on movement. Use alternative descriptors such as sore, hurting or aching.

Is pain reported/apparent?

Yes

No

Reluctant to complain of pain.

Assess pain intensity using a simple scale such as a verbal rating scale or numeric rating scale.

Ask the person to show where their pain is (pointing or pain map).

Is pain present?

Yes

No

Continue to monitor.

No immediate action needed.

Observe for potential indicators of pain:
- facial expressions
- verbalisations/vocalisations
- body movements
- altered interpersonal interactions
- changes in activity patterns or routines
- mental status changes
- physiological changes.

No immediate treatment needed.

Continue to monitor.

Evidence of morbidity that may be causing pain?

Yes

Treat morbidity.

Do potential pain indicators persist?

No

No immediate action needed.

Continue to monitor.

No immediate action needed.

Consider empirical analgesic trial or other pain-relieving intervention.

Monitor response carefully.

Yes

Provide reassurance if behaviour suggests fear.

Consider providing analgesics prior to movement.

Do potential pain indicators persist?

Yes

No

Attempt to interpret meaning of behaviour with help of caregivers familiar with the person. Provide individualised care.

Ensure basic comfort needs are met.

Continue to monitor.

No immediate action needed.
Pain Management Goals

- Decrease pain
- Improve function
  - Physical
  - Psychological
  - Social
- Minimize risk
  - Patient
  - Physician
  - Society
IDEAL TREATMENT OF PERSISTENT PAIN

Physical / Rehabilitative

Psychological

Medical Pharmacological Interventional

(CAM)
AGS RECOMMENDATIONS 2009

- Acetaminophen as initial and ongoing pharmacotherapy particularly musculoskeletal pain
- NSAIDs AND Cox-2 selective inhibitors may be considered rarely and with extreme caution
- Opioids for all patients with moderate-to-severe pain
Chronic Neuropathic Pain Guidelines from CPS

FIRST LINE
- Tricyclic antidepressants (Amitriptyline, nortriptyline)
- Gabapentinoids (gabapentin, pregabalin)
- Carbamazepine and oxycarbazepine in TN

Clin Interv Aging, 2008 March; Clair Haslam and Turo Nurmikko
Neuropathic Pain—Cont’d

SECOND LINE

Serotonin Noradrenaline Reuptake Inhibitors

- Venlafaxine
- Duloxetine
- Topical Lidocaine mixtures
Neuropathic Pain Cont’d

THIRD LINE

- Opioids (Morphine, oxycodone, methadone)
- Tramadol
- Citalopram and paroxetine
- Capsaicin
FOURTH LINE

- Cannabinoids
- Methadone
Tricyclic Antidepressants (TCA)


- Slight increase in cardiac deaths only with TCA doses greater than 100mg/day
- Gabapentin or Pregabalin is a better alternative
OPIOID TREATMENT IN OLDER PERSONS

- Significant differences in drug pharmacokinetics and drug sensitivities
- With swallowing difficulties use capsules that can be opened and sprinkled on food or flushed through nasogastric or gastric tubes
OPIOID TREATMENT IN OLDER PERSONS

- Presence of renal insufficiency also influences choice of opioids
- Oxycodone, morphine, propoxyphene, and meperidine all have active metabolites excreted renally.
- Dose adjustments are necessary for patients with renal insufficiency
- Hydromorphone a possible choice in patients with renal impairment
OPIOID TREATMENT IN OLDER PERSONS

- Transdermal fentanyl patch is another option for patients requiring around-the-clock pain control.
- 2005 FDA advisory: “should only be used in patients who are already receiving opioid therapy, who have demonstrated opioid tolerance and require a daily dose of at least 25 mcg/hr”
- Transdermal Butrans recently available in Ontario—once weekly for moderate pain safe in opioid naïve patients.
Topical Analgesic Agents

- Topical agents, either alone or in combination with other oral agents, may provide relief for patients with musculoskeletal and neuropathic pain.

- When compared with oral NSAIDs, topical NSAIDs showed similar rates or treatment success without the risk of GI events.
TOPICAL ANALGESIC AGENTS

Lidocaine 5%, Amitriptyline 5%,

Ketoprophen 7.5%, Ketamine 10%

In PLO Gel or Lidoderm TID-QID
NEWER DRUGS

- Buprenorphine Patch—Butrans – good for moderate pain in opioid naïve
- Targin—Ocycontin/Naloxone
- Onsolis—Buprenorphine oral patch for breakthrough palliative care
NEWER DRUGS

- NUCYNTA CR—Tapentadol Controlled release

- Jurnista—Once daily Hydromorphone using OROS technology
SUMMARY

- Views about management of pain in the elderly have changed in recent years
- It is an expectation that pain be recognized and managed appropriately
- MOHLTC 2009: Pain management a required program
- Pain can be effectively treated in the community and long-term care setting
SUMMARY

- A combination of non-pharmacologic and pharmacologic interventions can effectively reduce pain and its burden
- Consider physiological characteristics in older patients
- Pharmacologic modalities can be used safely and effectively to treat pain in older patients
REFERENCES


REFERENCES


“DON’T FOCUS ON THE PROBLEM. FOCUS ON THE SOLUTION”

“OUR JOB IS IMPROVING THE QUALITY OF LIFE, NOT JUST DELAYING DEATH”

PATCH ADAMS