Pain Management in our Aging Population

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Objectives for presentation:

1) Discuss how important effective pain management is for older adults.
2) Describe and discuss methods for assessing and managing pain in the elderly both pharmacological and non-pharmacological.
3) Discuss key points to include in education for patients and families about pain management strategies.
Background & Significance

- Physical pain is a significant problem for many older adults.
- It is estimated that at least 50% of community-dwelling older adults suffer from pain and among nursing home residents, as many as 85% experience pain.
- The high prevalence of pain is primarily associated with a number of chronic and/or acute conditions among older adults. (e.g., osteoarthritis, soft tissue injury from falls, and medical treatment like surgery and venipuncture).
- Despite its prevalence, evidence suggests that pain is often poorly assessed and managed in older adults.
Pain has major implications for older adults’ health, functioning, and quality of life. Pain is associated with depression, withdrawal, sleep disturbances, impaired mobility, decreased activity engagement, and increased health care use. Other geriatric syndromes can be exacerbated by pain such as falls, deconditioning, malnutrition, gait disturbances, and slowed rehabilitation.
Review Normal Aging Changes

- Effects of Aging on Metabolism
- GFR increases with age.
- Most medications are dosed to “normal” weight and healthy individuals.
- Older adults with cognitive impairment experience pain but are often unable to verbalize it.
- Many older adults have experiences, insufficient knowledge, personal beliefs and mistaken beliefs about pain and pain management.
Normal aging can effect the fate of the drug...

This refers to what the body does to the drug and the pharmacokinetics of the drug.

- Absorption
- Distribution
- Metabolism
- Excretion (also influenced by the route of administration).
Absorption & Distribution

- Changes in drug absorption once thought to be due to aging changes more recently are thought to be due to underlying disease states and changes in absorption in persons taking multiple medications.
- Drug distribution changes include decreased cardiac output, reduced total body water, decreased serum albumin and increased body fat.
Metabolism is mathematical

- Elimination-time to eliminate drug from the body.
- Clearance- hepatic function plays a crucial role however the kidneys are the most important organ for elimination of drugs.
- Accumulation-occurs whenever metabolism and elimination are exceeded by the amount of available drug.
- Polypharmacy- many drugs have additive effects, compete for binding sites and enzyme reduction.
Effects of Aging on Metabolism in the Liver

- Liver mass decreases
- Hepatic blood flow decreases
- These changes influence the pharmacokinetics of numerous agents used by the elderly.
- Many drugs have increased bioavailability when both hepatic blood flow and extraction are decreased.
- Other factors such as polypharmacy (e.g. medication for high blood pressure), alcohol use, and smoking may influence metabolism as well.
Effects of Aging on Metabolism in the Kidneys

- Decrease in renal mass and blood flow.
- Decrease glomerular filtration
- Decreased tubular secretion and absorption.
- Decreased creatinine clearance.
- Dose adjustments are needed.

*It is important to note: many of the equations used to predict renal function are much less accurate in the elderly.*
Pain Management Strategies

- Assess
- Plan
- Prevent
- Implement and teach
- Evaluate for effectiveness (e.g. reassess).
Assessment

- Pain assessment must be regular, systematic, and documented accurately to evaluate treatment effectiveness.
- Self-report is the gold standard for pain assessment.
- Review medical/surgical history, physical exam, and diagnostic tests to understand sequence of events contributing to pain.
Do not forget...

- Review medications, include current and previously used prescription and OTC drugs, and home remedies.
- Determine which pain control methods have previously been effective.
- Assess patient’s attitudes and beliefs about use of analgesics, and other therapies.
Where do we begin?

- Use a standardized tool to assess (e.g. numeric rating scale, The Faces Pain Scale).
- Older adults may have difficulty using 10-point visual analog scales.
- Assess pain regularly and frequently.
- Monitor effectiveness after giving medications.
- Observe for nonverbal and behavioral signs of pain, such as grimacing, withdrawal, guarding, rubbing, limping, shifting of position, aggression, agitation, depression, vocalizations, and crying.
Assessing and measuring pain begins with the patient's self-report.

Difficult to do in a patient population that may have sensory deficits and disparities in cognition, literacy, and language.

Tools must have simply worded questions that are easily understood.
Most widely used pain scales used with older adults are:

- **Numeric Rating Scale (NRS)** *the most popular tool*, the NRS, asks patients to rate their pain by assigning a numerical value with “0” indicating no pain and 10 the worst pain imaginable.

- **Verbal Descriptor Scale (VDS)** asks the patient to describe their pain from “no pain” to “pain as bad as it could be.”

- **Faces Pain Scale-Revised (FPS-R)** ask patients to describe their pain according to a picture of a facial expression that corresponds to their pain.
Verbal Descriptor Scale (VDS)

Please describe your pain from “no pain” to “mild”, “moderate”, “severe”, or “pain as bad as it could be.”

- Asks the older adult to select a word that best describes their pain.
- Found to be easiest to complete and most preferred by older patients.

Available: Pain Assessment for Older Adults: Try This www.consultgerirn.
When Older Adults are Cognitively Intact

- Ask about the presence of pain in regular and frequent intervals
- Allow older adults sufficient time to process questions
- Explore different descriptive words, such as ‘aching’, ‘discomfort’, ‘burning’
- Factors such as neuropathic pain and sensory changes can influence description
- Address any cultural influences that could inhibit or alter pain assessment or patient’s report of pain.
When pain is suspected but assessment is ambiguous?

- Pain in older adults is undertreated, and it is especially so in patients with moderate to severe dementia.
- Patients' ability to communicate verbally can make "self report" impossible.
PAINAD Scale

- 5-item observational tool (breathing, negative vocalization, facial expression, body language, consolability).
- Total scores range from 0-10 (based on a scale of 0-2 for each of the 5 items), with a higher score indicating more severe pain (0= no pain to 10= severe pain).
Common myth among older adults is that pain is a “normal” part of aging; if a patient does not verbalize that they are in pain, they must not be “in pain.”

An effective approach to pain management in this patient population is to assume that they do have pain if they have conditions or procedures that are typically painful!!!
Ongoing Assessment

- Watch for changes in behavior from the patient’s usual patterns.
- Gather information from family members about the patient’s pain experiences, verbal and nonverbal behavioral expressions of pain, particularly in patients with dementia or cognitive dysfunction.
- If symptoms persist, assume pain is unrelieved and treat accordingly.
- Anticipate and aggressively treat pain before, during, and after painful diagnostic or therapeutic treatments.
Definitions for Pain in the Elderly

- “An unpleasant sensory and emotional experience”… “whatever the person experiencing the pain says it is, existing whenever he says it does.”
- Pain is usually characterized according to the duration of pain (acute or persistent/chronic) and cause of the pain (nociceptive or neuropathic).
- Definitions have implications for pain management strategies.
Acute pain

- Results from an injury, surgery, or disease-related tissue damage.
- Usually associated with autonomic activity, such as tachycardia and diaphoresis.
- Usually temporary and subsides with healing.
Chronic/Persistent Pain

- Usually last more than 3-6 months.
- May or may not be associated with a disease process.
- Autonomic activity is usually absent.
- Often associated with functional loss, mood and behavior changes, and reduced quality of life.
Nociceptive pain

- Results from disease processes (osteoarthritis, soft tissue injuries (falls or trauma), and medical treatment (surgery and other procedures).
- Usually localized and responsive to treatment.
Neuropathic pain

- Caused by pathology in the peripheral or central nervous system.
- Associated with diabetic neuropathies, phantom limb pain, neuralgias, stroke, and certain chemotherapy agents.
- Usually diffuse and less responsive to analgesic medications.
Pain Management Interventions

- Develop pain prevention/management plan.
- Include pharmacologic/non-pharmacologic strategies.
- Implement the plan of care and educate patient, family, and other clinicians.
- Evaluate with frequent reassessment.
Pharmacologic Considerations

- Older adults are at increased risk for adverse drug reactions.
- Medications must be monitored closely to avoid over or under medicating.
- Administration of pain medications ATC can maintain therapeutic levels and reduce side effects.
- Documentation and hand off communication with other care providers is vitally important with seniors.
Pain Medications for Use with Geriatric Patients: Mild pain

Medication: Nonopioids
- tylenol (325-650mg po q 4-6 h)
- ibuprofen (200-400mg po q6-8h)
- celebrex (cox-2 inhibitors), 100-200mg po q12-24h

Special considerations: tylenol max 4000mg/day and decreased max dose with hepatic/renal disease, and alcohol use. Ibuprofen max 3200mg (decreased with hepatic/renal disease), and may cause CNS symptoms and GI bleeding. Celebrex max 400mg/day, contraindicated in patients with sulfa sensitivity.
Since the launch of the SUI, the FDA met with stakeholders in workshop settings in order to identify areas of preventable harm…one group of experts met to address preventable harm associated with pain medication in older adults and identified the prescribing practices of NSAID’s as a therapy where medication errors potentially occur.
Lack of evidence-based practice guidelines, training and awareness of the multiple variables that increase the risk of pain medication (especially NSAID’s) in an already complex patient.

More than 50% of elderly patients were not properly educated by prescriber or pharmacist on the side effects associated with current medication regimen or over the counter NSAID’s.
OTC drugs and dietary supplements are often believed to be risk-free (by patients and prescribers) and are not asked about or documented.

No ONE guideline for “safe” administration of NSAID use in the elderly…there are 22 different guidelines containing NSAID’s or the elderly.
Proposed Interventions:

- Simplify and present one unifying document.
- Standardizing prescriber and patient education materials and/or incorporating new technology to increase information consistency and adoption.
- Improving prescriber adherence to NSAID guidelines and enhancing understanding of the pharmacology of NSAID’s in the geriatric population is essential to reduce medication errors.

Medications for mild-moderate pain

Opioids:
- Tramadol (Ultram) 25-50mg po q 4-6h
- Codiene, 15-30mg po q 4-6 h (no max)
- Hydrocodone (Vicodin, Lorcet, Lortab), 2.5-5mg po q4-6h
- Oxycodone (OxyContin, Percodet, Tylox) 10mg po q 12 or 2.5-5mg q 4-6

Special considerations for opioids: Caution with Tramadol in patients with renal/hepatic impairment. Avoid in patients at risk for seizures. Codiene is usually not recommended in older adults d/t greater risk of causing nausea and constipation. Hydrocodone and oxycodone are dose limited because of the dose combinations with tylenol and ibuprophen. Also can cause CNS depression, and respiratory depression.
Moderate to Severe Pain

- Morphine immediate release (Roxanol) 10-30mg po q 4-6h. Recommended for breakthrough pain
- Morphine sustained release (MS Contin) 15 mg po q 12h. Limited usefulness in patients with renal insufficiency.
- Transdermal Fentanyl (Duragesic) 25 mcg/hr patch q 72h (lowest patch dose recommended for patients requiring oral morphine 60 mg per day.
- Hydromorphone (Dilaudid) 2-4 mg po q 3-4h. Can be used for breakthrough pain or for ATC dosing.
Problems with Opioid Use

- Effective at treating moderate to severe pain but elderly people and many health care providers are reluctant to use them due to fears of overdose, side effects, and intolerance.

- Potential side effects include nausea, constipation, drowsiness, cognitive effects, and respiratory depression.
The Agency for Healthcare Research and Quality (AHRQ) recommends achieving safe doses of opioids in elderly by reducing the dose 25% to 50%.

Tolerance to side effects (e.g. constipation) develops over time. The American Geriatric Society (AGS) strongly recommends that stool softeners or routine laxatives be administered along with opioids.
Adjuvant Medications

*Can be administered with other analgesics to achieve optimal pain control through additive effects or to enhance response to analgesics.*

- Tricyclic antidepressants have shown dual effects on both pain and depression but they are inappropriate in older adults due to high rates of side effects.

- Cymbalta: Cymbalta is indicated for the management of diabetic peripheral neuropathic pain and fibromyalgia. Cymbalta is also indicated for the management of chronic musculoskeletal pain due to chronic osteoarthritis pain and chronic low back pain. (Headache, weakness or feeling unsteady, confusion, problems concentrating, or memory problems, which may be signs of low sodium levels in the blood. Elderly people may be at greater risk).

- Neuropathic pain; Pregamblin (Lyrica) Older adults may be more sensitive to the side effects of this drug, especially drowsiness, dizziness, unsteadiness, and confusion.

- Anticonvulsants (e.g. gabapentin *neurontin*) may be used with fewer side effects.

- Local anesthetics, such as lidocaine as a patch, gel, or cream, can also be used.
Equianalgesia and The WHO analgesia pain ladder

- Understanding dose conversion charts and ratios.
- These charts provide lists of drugs and doses of commonly prescribed pain medications that are approximately equal in providing pain relief.
- Using equianalgesic charts and the WHO analgesic ladder can provide more optimal pain relief and fewer side effects in older patients.
The Ladder (WHO, 1986)
Drugs to Avoid

- Demerol and propoxyphene combination products (e.g. Darvon, Darvocet).
- Ketorolac (Toradol), and pentazocine (Talwin).

*These medications cause CNS side effects that include confusion and hallucinations. May not be effective at common prescribed dose and have more side effects than analgesia.*

- Sedatives, antihistamines, and antiemetics should be avoided or used with caution due to long duration of action, risk of falls, hypotension, anticholinergic effects, and sedation.
Nonpharmacological Pain Management

- These pain management treatment should be complimentary rather than a substitute for medication(s).
- Evidence supports that many older adults are willing to use nonpharmacological methods for pain management.
- The most common strategies include activity restriction, heat/cold application, and exercise.
- Treatment strategies usually fall into two categories: cognitive-behavioral approaches and physical pain relief approaches.
Barriers and Preferences for using Nonpharmacological Pain Management Strategies

- Cognitive status
- History of availability and effectiveness of treatments
- Personal attributes and beliefs
- Fear of adverse effects (more pain/injury)
- Believe pain is just a “normal” part of aging
- Poor communication with health care providers
Physical Strategies for Pain Relief

- **Exercise**: Moderate exercise should be part of everybody’s pain management program.
- Many older adults should have a prescribed and monitored program.
Electrical Stimulation

- TENS: electrical stimulation can be beneficial as an adjunct therapy and has been shown to have no negative effects.
Cognitive-behavioral strategies

- Self-management (e.g. restricting behaviors and physical positions that cause or exacerbate pain).
- Biofeedback may be beneficial for select patients with persistent/chronic pain.
- Distraction such as diversional activities.

*Most of these therapies have evidence that they are only effective as an adjuvant for treating pain.*
In some situations, heat or cold application or massage may be appropriate. But caution older adults who have neuropathic pain or ischemic pain stemming from peripheral arterial disease not to use heat or cold, as this may cause altered sensation in the extremities and tissue damage.
Distraction
A team approach is used to provide support from diagnosis to end of life. Adequate pain assessment and treatment is fundamental to the delivery of effective palliative care. (ONS, 2012)
To summarize...

- Pain is a significant problem for older adults and can have potential negative impact on their independence, function, and quality of life.
- For pain to be managed it must be systematically assessed.
- Pain management must be tailored to the type and severity of pain with medications that are safe and combined with nonpharmacological and adjuvant therapies to heighten effectiveness.
- Older adults, their families, and their care providers must be educated and empowered to effectively manage pain.
What questions do you have?

PAIN IS INEVITABLE
SUFFERING IS OPTIONAL
