Geriatrics and Palliative Care Literature Updates

Kenneth Covinsky, MD  @geri_doc
Eric Widera, MD  @ewidera
University of California San Francisco
San Francisco VA Medical Center

Methods

- Search of leading journals
  - January 2016-December 2016
- Search of social media:
  - Twitter (i.e. @AGSJournal), Blogs, PC-FACS, podcasts,
    Health In Aging Research Summaries (healthinaging.org)
- Selection Criteria
  - Impact and Interest

Disclosures

- Eric Widera
  - Associate Editor, Social Media Editor, for the Journal of the American Geriatrics Society (JAGS)
- Ken Covinsky
  - Editorial Board for the Journal of the American Geriatrics Society (JAGS); Associate Editor, JAMA Internal Medicine

Background

• Delirium common
  • Especially near the end of life
• Delirium associated with poor outcomes
  • Significant and distressing symptomatology
• There are currently no drugs approved for the treatment of delirium
  • Antipsychotics used in 9% of non-psychiatric admissions, most for delirium (1)


Study Design:

• RCT of risperidone, haloperidol, or placebo
• 247 adults patients in with advanced disease
  • 11 inpatient hospices or hospital palliative care units in Australia
• Inclusions included:
  • DSM IV diagnosis of delirium
  • Memorial Delirium Assessment Scale (MDAS) score of ≥ 7 (delirium severity)
  • The presence of at least one of 3 target symptoms of delirium on Nursing Delirium Screening Scale (NuDESC)
    • inappropriate communication
    • inappropriate behavior
    • illusions/ hallucinations
    • Ability to take oral solution of medications

Exclusions Included

• Delirium secondary to substance withdrawal
• Regular use of antipsychotic drugs within 48 hours
• Previous adverse event with antipsychotic drugs
• Clinician predicted survival of ≤ 7 days

Risperidone vs Haloperidol vs Placebo

≤ 65 Years of Age
1mg then 0.5 maintenance q12h

> 65 Years of Age
0.5mg then 0.25 maintenance q12h

Dose reduction if:
• Adverse effects
• Resolution (MDAS score <7 or NuDesc <1 for 48 hrs)

Dose increase if:
• ≥1 on NuDESC: increase 0.25 then 0.5
• If >2 & safety issue or distress: midazolam 2.5mg SQ q2h prn (or 5mg if crisis or no response)

NuDESC Score q8h
Risperidone vs Haloperidol vs Placebo

- ≤ 65 Years of Age
  - 1mg then 0.5 maintenance q12h
  - NuDESC Score q8h
  - Dose reduction if:
    - Adverse effects
    - Resolution (MDAS score <7 or NuDesc <1 for 48 hrs)
- > 65 Years of Age
  - 0.5 mg then 0.25 maintenance q12h
  - Dose increase if:
    - ≥1 on NuDESC: increase 0.25 then 0.5
    - If >2 & safety issue or distress: midazolam 2.5mg SQ q2h prn (or 5mg if crisis or no response)

Primary Outcome

- Changes in symptoms of delirium associated with distress from baseline to day 3
  - inappropriate behavior
  - inappropriate communication
  - illusions/hallucinations

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  - inappropriate behavior
  - inappropriate communication
  - illusions/hallucinations
Secondary Outcomes

- Antipsychotics had:
  - Greater extrapyramidal effects
  - Greater use of rescue midazolam
  - Worse overall survival
    - For risperidone this didn’t reach significance
    - Median survival:
      - placebo group = 26 days
      - risperidone = 17 days
      - haloperidol = 16 days

Limitations

- Inclusion Criteria: MDAS >7
- Delirium Symptom Score was not a previously validated tool
- Benzodiazepine as a rescue medication
- Did they just use the wrong antipsychotics or not enough?
- Can you generalize to other delirious patients?
Show Me the Evidence

- JAGS 2016 systematic review and meta-analysis:
  - Not associated with change in:
    - Delirium incidence
    - Duration
    - Severity
    - Hospital or ICU Length of Stay


Concluding Tweet

Eric Widera, MD @EWidera May 20
Antipsychotic drugs don’t improve symptoms of delirium associated with distress in patients receiving #palliative care.

Eric Widera, MD @EWidera May 20
Non-pharmacologic approaches are not only the first line therapy, but one of the only evidence based therapies for delirium. #geriatrics
Research Question

• Does a nurse led targeted multicomponent targeted fall prevention program reduce falls in the hospital?

What is the six-pack? (Hint: Not Beer)

• Fall risk assessment tool
• Targeted application of six interventions
  • Fall Alert Sign on Patient Door
  • Supervision of Patient in the bathroom
  • Placing walking aides within reach
  • Establishment of a toileting regimen
  • Use of a low bed
  • Use of a bed alarm

Study Design

• Cluster randomized design
  • 24 hospital wards randomized to 6-pack or control
  • Medical and Surgical wards
  • 46000 patients (mean age 67, 25% over age 80, 50% women, 77% emergency admits)

Results: 6-Pack packs no punch

<table>
<thead>
<tr>
<th></th>
<th>Usual Care</th>
<th>Six-Pack</th>
<th>Risk Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls /1000 bed days</td>
<td>7.03</td>
<td>7.46</td>
<td>1.04 (0.78 - 1.37)</td>
</tr>
<tr>
<td>Fall injury/1000 bed days</td>
<td>2.53</td>
<td>2.33</td>
<td>0.96 (0.72 - 1.21)</td>
</tr>
</tbody>
</table>
What is the six-pack? (Hint: Not Beer)

- Fall risk assessment tool
- Targeted application of six interventions
  - Fall Alert Sign on Patient Door
  - Supervision of Patient in the bathroom
  - Placing walking aids within reach
  - Establishment of a toileting regimen
  - Use of a low bed
  - Use of a bed alarm

Concluding Tweet

![Image](http://example.com/conclusion_tweet.png)

The Six-Pack Intervention Program did prevent falls or fall injuries in the hospital. #geriatrics

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Effects of an Intervention to Increase Bed Alarm Use to Prevent Falls in Hospitalized Patients

A Double-Blind Randomized Trial

**Original Research**

**Improving Patient Care**

**Effects of an Intervention to Increase Bed Alarm Use to Prevent Falls in Hospitalized Patients**

A Double-Blind Randomized Trial


"Effects of an intervention to increase bed alarm use to prevent falls in hospitalized patients." - Annals of Internal Medicine, 2012

**Comparison of Posthospitalization Function and Community Mobility in Hospital Mobility Program and Usual Care Patients**

A Randomized Clinical Trial

**JAMA Intern Med. 2016;176(7):921-7**

"Comparison of posthospitalization function and community mobility in hospital mobility program and usual care patients." - JAMA Internal Medicine, 2016
Hospitals are Bad for Older Persons

- Family observation:
  - Grandma went to hospital. Docs said she was all better but she had trouble walking, needed lots of help, and was never the same again
- Empiric Data: Hospital Acquired Disability
  - 1/3 of patients over 70 will be discharged with a new ADL disability they did not have before hospitalization
  - Major declines in mobility following hospitalization
  - Most of these are permanent

Hospitalized Patients are Put to Bed and Stay There

- Accelerometers worn by older patients at Birmingham VA
  - All could walk before hospitalization
  - 80% could walk unassisted at time of admission
- An average day
  - 83% lying in bed (20 hours!)
  - 13% sitting (3.1 hours)
  - 4% standing or walking (55 minutes)

Study Design / Participants

- Randomized Trial comparing hospital mobility program to usual care
- Participants
  - 100 patients admitted to medical service at Birmingham VA (mean age 73)
  - Able to walk without assistance 2 weeks before (but could use mobility aid)
  - No dementia or delirium

Mobility Intervention

- Graded mobility: assisted sitting, standing, walking
  - 2 walks per day –20 minutes
    - Mobility aids (ie, walker) provided as needed
  - Interventionist: Research assistant (no background in medicine, nursing, or therapy)
    - Trained in safe patient handling by physical therapist
- Behavioral Intervention
  - Goal: increase time spent out of bed
  - Daily goal setting, barrier assessment, activity diary
  - Encouraged highest level of safe activity (ie, sit up in bed and stand for 3 minutes)
Outcomes

- ADL Disability at 30 days
- Life Space Mobility at 30 days
  - Ability to move through ones community
  - Considers distance moved, frequency, and degree of independence
- Adverse effects (Falls)

Results

<table>
<thead>
<tr>
<th></th>
<th>Admission</th>
<th>30 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADL Score</td>
<td>Mobility Intervention</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>Usual Care</td>
<td>8.7</td>
</tr>
<tr>
<td>Life Space Score</td>
<td>Mobility Intervention</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Usual Care</td>
<td>53</td>
</tr>
</tbody>
</table>

Falls: None in Mobility Intervention, 3 in Usual Care
Life Space Difference: Going to town without assistance 1-3 times a week vs going to town less than once a week, needing cane

Bottom Line

- A low tech intervention consisting of walking hospitalized patients twice day & encouraging patients to walk led to marked improvements in community mobility 30 days after discharge
- Time for definitive study
  - Multicenter
  - Include cognitively impaired
- Action should happen now

Falls as a Never Event: The CMS War on Mobility

- CMS does not pay for fall related injuries in the hospital and imposes financial penalties on hospitals with highest fall injury rates
- “current fall prevention efforts reflect a troubling underlying assumption that keeping patients from moving can stop falls”
- “treating falls as “never events” has led to over implementation of measures with little efficacy for falls yet profound contribution to immobility”

Growdon, Shorr, Inouye; JAMA IM; April 24 2017; online early
Glumetza (metformin ER) $10,000 for 3 month supply (with the coupon)

Source: https://www.goodrx.com/glumetza
Glumeta (metformin ER)
$10,000 for 3 month supply (with free coupon)

Source:
https://www.goodrx.com/glumeta

The Problem

- Low testosterone levels have been alleged to be contributors to virtually all ails of aging
- Heavily marketed to patients through direct to consumer advertising
- Institute of Medicine panel call for trials to determine whether there is any benefit of testosterone treatment in men with low levels
Testosterone Trials Approach

- Targeted patients (Age 65+):
  - Low Testosterone (< 275 ng/dl) no cause other than age
  - Exclusion: Prostate cancer, severe BPH
  - Symptoms possibly referable to low testosterone
    - Sexual Function (decreased libido)
    - Physical Function (difficulty walking, slow gait speed)
    - Vitality (self report, High fatigue score)
- Trial powered to assess benefit. Not harm
  - Goal of determining whether full scale study appropriate

Treatments

- Testosterone
  - 1% androgel pump bottle: Starting dose 5 grams
  - Level checked periodically: Dose adjusted to keep level in normal range for 19-40 yo men
  - Treatment successful in raising to normal level in over 90% of subjects (mean 490 ng/dl)
- Placebo
  - Placebo gel designed to look like androgel

Subjects

- 790/51000 screened subjects enrolled
- Characteristics
  - Mean age 72
  - 71% with Hypertension
  - 63% with BMI > 30
  - 20% with History of MI or stroke
  - Mean testosterone level 239 ng/dl

Main Results

- Modest Effect of testosterone on sexual function
  - Average increase of 0.58 points on psychosexual daily questionnaire
  - Improvement greater earlier in trial that at 12 months
- No Impact of Testosterone on physical function
  - 50 meter increase in six minute walk test: 15.1% testosterone vs 11.8 % placebo (p=0.20)
- No Impact of Testosterone on fatigue
  - Improvement of 4 points on FACIT Fatigue scale: 69.5% testosterone vs 65.4% placebo p=.30
CV study outcomes

- Coronary CT angiography performed on subset of trial participants (n=140)
  - Testosterone group had increase in total non calcified plaque volume (the bad stuff)
  - Testosterone group had increase in total plaque volume
  - No change in calcified plaque volume

Summary

- Testosterone treatment led to modest improvements in sexual function
  - Smaller than impact of phosphodiesterase inhibitors
  - Pearls: “Given high levels of obesity, might dietary and physical activity intervention have more effect”
- Testosterone led to no improvements in physical function or fatigue
- Trial not powered to detect harms, but some evidence of accelerated atherosclerosis

Where do things stand with testosterone

- Testosterone should not be given to men to treat decreasing physical function, fatigue, or general symptoms of malaise
- Testosterone probably does lead to modest improvements in sexual function in men with decreased libido
  - However, it can not be recommended without a trial fully powered to assess harms
  - Questionable treatment in setting of other effective therapies
- We have not found the fountain of youth!
“We are disappointed that this venerated journal supported the publication of the trial and utilized it as a platform to selectively discredit previously peer-reviewed data.”

The Cranberry Institute

Background

- Asymptomatic bacteriuria common, making UTI diagnosis difficult
- UTIs are the most common infection in nursing homes
  - *E. coli* accounts for approximately 50% of uropathogens in nursing home residents
- Cranberry proanthocyanidin (PAC)
  - active ingredient in cranberry
  - inhibits adherence of *P fimbriated Escherichia coli* to uroepithelial cells
- Prior study showed that cranberry juice reduced bacteriuria plus pyuria in older women (1)
  - Analysis was not by intention to treat
  - More of the placebo group (25%) than the cranberry group (7%) had a history of recurrent UTI
Methods

• 185 female nursing home residents aged 65 years or older with or without bacteriuria plus pyuria at baseline
• Randomized to 2 oral cranberry capsules or placebo
  • 72 mg proanthocyanidin = or 20 ounces of cranberry juice
• Primary Outcome
  • Any presence of bacteriuria plus pyuria assessed every 2 months over the 1-year study surveillance

Juthani-Mehta. JAMA 2016

Results – Primary Outcome

• No significant difference in bacteriuria plus pyuria
  • Adjusted rates, 29% vs 29%
  • Odds ratio, 1.01; 95% CI, 0.61-1.66; \( P=0.98 \)

Secondary Outcomes

• No significant difference (intervention vs control)
  • Symptomatic UTIs (10 vs 12)
  • Mortality (17 vs 16)
  • Hospitalization (33 vs 50)
  • Multidrug-resistant gram-negative bacilli bacteriuria (9 vs 24)
  • Antibiotics administered for suspected UTI (692 vs 909)
  • Total antimicrobial utilization (1415 vs 1883)

Limitations

• Primary outcome was bacteriuria and pyuria
  • Do we care about this?
• Cranberry-containing products may be more effective in women with recurrent UTIs \(^{(1)}\)
  • 69% of patients did not experience a UTI the year prior
  • It just may be something else in the juice

\(^{(1)}\) Arch Intern Med. 2012;172(13):988-996
Concluding Tweet

Cranberry capsules do not significantly decrease the presence of bacteriuria plus pyuria in female nursing homes residents*.

* There may be subpopulations not specifically focused on in this study that do benefit (those with recurrent UTIs)

Background

• β-blockers are a guideline-recommended intervention after an acute myocardial infarction (AMI)

  8.1. Beta Blockers: Recommendations
  Class I
  2. Beta blockers should be continued during and after hospitalization for all patients with STEMI and with no contraindications to their use,17,18 (Level of Evidence: B)

  • Less often prescribed to older adults, especially those with functional impairment or multiple comorbidities

Study Design

• Design
  • Propensity score matched cohorts of those that did & didn’t initiate β-blocker therapy after hospitalization for AMI

  • Population Studied:
  • Nursing home residents 65 years or older hospitalized for AMI
  • Focused on new users (no β-blockers within 4 months of AMI)
Results

• Within 3 months after hospital discharge:
  • 12% experienced functional decline
  • 25% were re-hospitalized
  • 14% died

• Users of β-blockers had:
  • No difference in hospitalization rates
  • Lower odds of dying within 90 days (HR, 0.74; 95% CI, 0.67-0.83)
  • Higher odds of functional decline in the first 90 days after AMI (1.14 (95% CI, 1.02-1.28))

Benefits and Burdens of β-blockers

NNT to prevent 1 death: 26

NNH to cause 1 functional decline: 52
A Word of Caution

• β-blockers users are different than non-users
  • Caution with survival outcomes
  • What about functional outcomes?
    • opposite direction of expected bias
  • What about other outcomes of interest?


Concluding Celebrity Tweet

Donald J. Trump @realDonaldTrump 12h
β-blockers increase survival in older nursing home residents after acute MI. #geriatrics

Concluding Celebrity Tweet

Donald J. Trump @realDonaldTrump 12h
β-blockers increase survival in older nursing home residents after acute MI. #geriatrics

FactCheck.org @factcheckdotorg  May 7
β-blockers increase survival in older nursing home residents after acute MI, but may also increase risk of functional decline. #geriatrics
Study Goal

• Does Adherence to a healthy lifestyle lead to:
  • Longer Life Span?
  • Longer Life Free of Disability?

Methods

• Follow 5248 people enrolled in Cardiovascular Health Study in 1990
  • Over age 65 at enrollment (mean = 72)
• Track Survival
• Freedom from disability
  • Difficulty in activities of daily living (eating, bathing, dressing, toileting, transferring, walk in home)
• Compare Overall Survival and Disability-Free Life Expectancy (Able Life)

<table>
<thead>
<tr>
<th>Years of Remaining Life and Disability Free Life</th>
<th>Life-Span</th>
<th>Disability-Free Life Span</th>
<th>% Disability-Free</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>70-74</td>
<td>15.7</td>
<td>11.0</td>
</tr>
<tr>
<td></td>
<td>80-84</td>
<td>10.1</td>
<td>5.4</td>
</tr>
<tr>
<td>Men</td>
<td>70-74</td>
<td>13.1</td>
<td>10.1</td>
</tr>
<tr>
<td></td>
<td>80-84</td>
<td>7.9</td>
<td>5.1</td>
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Healthy vs Unhealthy Life Style

<table>
<thead>
<tr>
<th></th>
<th>Healthy</th>
<th>Unhealthy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>Never</td>
<td>Current</td>
</tr>
<tr>
<td>Alcohol</td>
<td>1-7 per week</td>
<td>14 or more per week</td>
</tr>
<tr>
<td>BMI</td>
<td>18-24.9</td>
<td>&gt; 30</td>
</tr>
<tr>
<td>Exercise Intensity</td>
<td>2300 kcal/week</td>
<td>375 kcal/week</td>
</tr>
<tr>
<td>Blocks walked per week</td>
<td>48</td>
<td>6</td>
</tr>
<tr>
<td>Social Network</td>
<td>Extensive</td>
<td>Limited</td>
</tr>
<tr>
<td>Social Support</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

The Best of Times, The Worst of Times

• Good News:
  • Lifestyle Factors that are modifiable
    • Are Associated with Longer Life
    • The additional life span is disability free
    • Reduced Time in Disability
  • Bad News
    • Even those with a very healthy lifestyle can expect to spend substantial time disabled

What do we tell the public about aging?

• We should aggressively promote healthy lifestyles and help our patients achieve those lifestyles
• But lets play no part in propagating the myth one can avoid the disabilities of aging
  • Stigmatization
  • Avoid serious public discussion about the needs of our patients
• Health and Supportive services that promote quality of life and well being during the disabled phase of life
Where do individuals with dementia die?

- **Hospital**: 13%
- **Nursing home**: 55%
- **Home**: 15%
- **Other**: 67%

This diagram shows the distribution of where individuals with dementia die, with a significant portion dying at home. The data is based on the research by Mitchell SL. JAGS. 2005;32(9):534-10.

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**Use of Video Decision Aids to Promote Advance Care Planning in Hilo, Hawai’i**

Angeline F. Violoncini, MD, MPH1,2, Michael K. Parache-Otto, MD, MPH1,3, Annette Delgiudice Davis, MD, JD1, Robert Lubanski, BS1, Anjali Bhatnagar, MPH1, and Rae Setz, MD4

1Takatomu Medical Group, Hilo, HI, USA; 2Takatomu Medical Group, Hilo, HI, USA; 3MD Anderson Cancer Center, Hilo, HI, USA; 4Takatomu Medical Group, Hilo, HI, USA

**INTRODUCTION**

Advance care planning (ACP) seeks to promote patient goals and values that are consistent with patients’ decisions. ACP is a shared decision-making approach that works to promote care delivery that is consistent with patients’ informed wishes. Subsequently, there has been an increase in the use of ACP with new regulations for reimbursement by the Centers for Medicare and Medicaid Services (CMS) and adoption by the Agency for Healthcare Research and Quality. Two important barriers to widespread adoption of ACP have been lack of training and cost. Over the last decade, our group, the Video Images of Disease for Ethical Outcomes (VIDEO) Consortium, has conducted controlled trials showing that use of a decision aid increases rates of informed decision.
Nursing Homes: A Different Beast

- Little physician involvement
- High turnover of staff
- Decisions for patients most often done by family decision makers
  - Express more dissatisfaction with communication and care in nursing homes than any other setting
- Access to technology lacking

Methods

- Single blinded cluster randomized control trial
  - Including 302 residents with advanced dementia and their family decision makers
- Randomized 22 nursing homes to
  - Intervention
    - 18 minute video decision aid
    - Care plan meeting with a guide to structure the discussion around goals of care.
  - Control
    - Video on interacting with individuals with dementia
    - Regular care planning process

Methods

- Primary Outcome at 3 months
  - Quality of communication questionnaire
    - (0-10 - higher ratings indicating better quality)
  - Family concordance with clinicians on the primary goal of care
  - Treatment consistent with preferences (Advance Care Planning Problem score)
- Secondary outcomes at 9 months
  - Family ratings of symptom management and care
  - Palliative care domains in care plans
  - Medical Orders for Scope of Treatment (MOST) completion
  - Hospital transfers.

Goals of care: choosing a path

https://vimeo.com/185866577

https://www.med.unc.edu/pcare/resources/goals-of-care
Results

- Demographics
  - Mean age was 86.5 years
  - 82% women
  - 13% African American

- Primary goal comfort
  - 65% at enrollment
  - 79% at 9 months or death

Results - Outcomes

- Improved
  - Quality of communication: 6.0 vs 5.6; \( P = .05 \)
  - Concordance on goals at 9 months: 88% vs 71%, \( P = .001 \)
  - Palliative care in treatment plans
  - Doubled use of MOST / POLST (35% vs 16%, \( P=0.05 \))
  - Reduced hospital transfers by half (0.078 vs 0.163 / 90 person days)

- No difference
  - Family ratings of treatment consistent with preferences
  - Family rating of quality of care
  - Survival

The Challenge

- Family often discussed medical treatment choices with nurses or social workers
- Only 1 in 4 family decision makers talked with physicians during course of the study

Concluding Tweet

Free goals of care decision aid improves quality of communication & lowers hospitalizations for nursing home residents with dementia. #HPM

https://www.med.unc.edu/pcaresource/goals-of-care
Hip Fracture Hurts

- Dilemma: Hip Fracture Pain and Opioids
- Hip Fracture can be extremely painful
- Pre and post-operative pain strongly linked to adverse outcomes
  - Poor mobility and function
  - Delirium
- Opioids also have risks
  - Sedation
  - Delirium

Study Goal

- Determine whether a regional nerve block started at time of ER presentation led to
  - Less opioid use and fewer opioid complications
  - Decreased pain
  - Improved mobility post-operatively and six weeks following surgery

Subjects

- 161 patients with hip fracture presenting to 3 NYC Emergency rooms
  - Mean age=83, 72% women
  - Dementia and delirium excluded
Treatment Options

- Intervention group
  - At ER presentation, ultrasound guided femoral nerve block (20cc 0.5% bupivacaine)
    - Administered by ER residents
  - Within 24 hours, anesthesiologist inserted infusion catheter for continuous infusion of ropivacaine
  - Oral and IV Analgesic therapy at discretion of treating team

- Usual Care
  - Oral and analgesic therapy at discretion of treating team

Impact on Pain and Pain Treatment

<table>
<thead>
<tr>
<th></th>
<th>Nerve Block</th>
<th>Usual Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>POD 3 rest pain</td>
<td>1.8</td>
<td>2.9</td>
</tr>
<tr>
<td>POD 3 transfer pain</td>
<td>4.7</td>
<td>5.9</td>
</tr>
<tr>
<td>POD 3 Walk Pain</td>
<td>4.1</td>
<td>5.6</td>
</tr>
<tr>
<td>Daily IV MSO4 equivalents mg/d</td>
<td>2.1</td>
<td>3.5</td>
</tr>
<tr>
<td>Severe opioid side effect</td>
<td>3.0%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Effect on Function

<table>
<thead>
<tr>
<th></th>
<th>Nerve Block</th>
<th>Control</th>
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</thead>
<tbody>
<tr>
<td>2 minute walk POD 3, feet</td>
<td>171</td>
<td>100</td>
</tr>
<tr>
<td>Missed or incomplete PT session</td>
<td>12.5%</td>
<td>21.2%</td>
</tr>
<tr>
<td>FIM Mobility Score, 6 weeks</td>
<td>10.3</td>
<td>9.1</td>
</tr>
</tbody>
</table>

Summary

- Regional nerve block on ED presentation, continuing through post-op day 3 resulted in
  - Better pain control
  - Less opioid use and fewer opioid side effect
  - Better post operative and week 6 function
- Key Caveat:
  - Exclusion of cognitively impaired patients
- Nerve blocks are a promising treatment in patients with hip fracture
Background

- Chronic Lower Back Pain (CLBP)
  - Approximately 12% to 30% of the population has CLBP annually and lifetime prevalence is approximately 75%
- Mindfulness-based stress reduction (MBSR)
  - Semi-standardized 8-week program created in 1979
  - Based on meditation techniques
    - Purposeful, nonjudgmental attention to the present moment
    - Increasing awareness of breathing, thoughts, and bodily sensations and learning to observe them from a detached perspective
- 2016 trial of MBSR vs cognitive behavioral therapy vs usual care (1)
  - Greater improvement in back pain and function at 26 weeks
  - Limitation: Ages 20-70, no active control group

Methods

- Community dwelling adults > 65 years or older
  - functional limitation due to chronic lower back pain
  - chronic pain (>3 months) of moderate intensity daily or almost every day
- Randomized to:
  - Mind-body program (n = 140)
    - 8-weekly 90 minute group sessions followed by 6 monthly sessions
  - Health education program (n = 142)
    - 8-weekly group health education sessions followed by 6 monthly sessions
- Primary Outcome:
  - Roland and Morris Disability Questionnaire
    - Range, 0-24
    - Clinically meaningful change: 2.5- to a 5.0-points
Functional Results: RMDQ

<table>
<thead>
<tr>
<th></th>
<th>INTERVENTION</th>
<th>CONTROL</th>
<th>ADJUSTED DIFFERENCE (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 week</td>
<td>- 3.5</td>
<td>- 2.3</td>
<td>- 1.1 (-2.1 to -0.01)</td>
</tr>
<tr>
<td>6 month</td>
<td>- 3.4</td>
<td>- 2.8</td>
<td>- 0.4 (-1.5 to 0.7)</td>
</tr>
</tbody>
</table>

• 57% vs 45% had at least a 2.5-point clinically significant improvement at 8 weeks (p=0.51)
  • No difference at 6 months (49% in both groups)

Other Secondary Outcomes

• No difference in average pain, but improvements in current and most severe pain in the past week
• More individuals with a 30% improvement in current and most severe pain in the past week (8 weeks and 6 months)
• Improved pain self-efficacy but not sustained for 6 months
• No change in self-reported mindfulness, quality of life, and pain catastrophizing
Grant me the serenity to accept the things I cannot change,
courage to change the things I can,
Grant me the serenity to accept the things I cannot change,
courage to change the things I can,
and wisdom to know the difference

Concluding Tweet

A mind-body program for chronic LBP improves short-term function & long-term pain. #geriatrics