Management of Geriatric Trauma

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Disclosure(s)

- None
Objectives

• Understand the criteria for identification of the Geriatric Trauma Patient
• Review initial trauma team evaluation of the Geriatric Trauma Patient
• Specialize inpatient care of the Geriatric Trauma Patient
• Determine the discharge needs of the Geriatric Trauma Patient
What is Geriatric?

- As per Eastern Association for the Surgery of Trauma (EAST) Geriatric Trauma Practice Management Guideline, Injured patients with advanced age (≥65)
- ACS defines geriatric trauma as patients >55
- The World Health Organization (WHO) defines “older adult” as those who are over 60 years of age
Geriatric Trauma

- From 2011 and for the next 19 years, more than 10,000 Baby Boomers will reach the age of 65
- The elderly account for only 1-12% of all trauma victims
- They consume 25% of trauma related healthcare resources
Annual Trauma Overview

- Nationwide trauma statistics (NTDB Annual Report 2015)
  - 860,694 trauma admissions/year
  - 356,711 (41.45%) that are geriatric 55 years and older
    - Falls are the most common mechanism of injury (250,132/70%)
  - 255,880 (29.7%) that are geriatric 65 years and older
    - Falls are the most common mechanism of injury (123,138/48%)
Annual Trauma Overview

- University Medical Center of El Paso trauma statistics
  - 2756 Trauma admissions (2014)
    - 510 Geriatric trauma admissions ≥65 years of age (18.5%)
  - 3027 Trauma admissions (2015)
    - 544 Geriatric trauma admissions ≥65 years of age (18.1%)
  - 2156 Trauma admissions (2016 YTD)
    - 410 Geriatric trauma admissions ≥65 years of age (19%)
Trauma Team Activation

- Increased risk for undertriage by both emergency medical services and Emergency Department personnel
- Lower threshold for trauma team activation should be used for elderly trauma patients
- Consider upgrading patients who are ≥65 years old and have a SBP of <110mmHg to a Level 1 trauma
  - SBP <110mmHg is Level 1 activation criteria at UMC
Initial Evaluation

- Determine medications that affect initial evaluation and care
  - Anticoagulants
  - ASA
  - Beta Blockers
  - ACE Inhibitors

- Consider common, acute, and/or non traumatic events that could complicate the patient’s presentation
  - Acute Coronary Syndrome
  - Hypovolemia/Dehydration
  - Cerebrovascular event
  - Syncope
Initial Evaluation cont’d.

- Lab Assessment
  - Lactic acid or blood gas
  - Coagulation panel
  - Renal function
  - Blood alcohol level and urine toxicology screen
  - Serum electrolytes
  - TEG or ROTEM
Initial Evaluation cont’d.

- Initial imaging should include liberal use of CT scanning for blunt injury
- Occult injuries are common in the elderly
  - Radiation exposure is a minimal risk
Initial Evaluation cont’d.

• Anticoagulation Reversal
  • Consider implementation of a policy for anticoagulation reversal if one not already present
  • Consider products such as PCC, DDAVP, platelets, FFP, and possibly Factor VII
Specialized Geriatric Inpatient Care

- In trauma, proactive geriatric consultation has been associated with fewer episodes of delirium, fewer in-hospital falls, lesser likelihood of discharge to a long-term care facility, and a shorter length of stay.
- Develop criteria for early geriatric consultation and geriatric expertise on the multidisciplinary trauma care team.
Specialized Geriatric Inpatient Care cont’d

- Identification of Seniors at Risk (ISAR) is a screening tool used to identify patients who have a greater likelihood of functional decline, nursing home admission, long-term hospitalization, or death
- A score $\geq 2$ is a positive screen and a geriatric consultation should be obtained and a multidisciplinary approach taken
Specialized Geriatric Inpatient Care cont’d

- ISAR questionnaire
  - Before you were injured, did you need someone to help you on a regular basis?
  - Since the injury, have you needed more help than usual to take care of yourself?
  - Have you been hospitalized for 1 or more nights during the past 6 months?
  - In general, do you have problems seeing well?
  - In general, do you have serious problems with your memory?
  - Do you take more than 3 different medications everyday?
Specialized Geriatric Inpatient Care cont’d

• Geriatric trauma patients are at particular risk for medication related adverse events
  • Establish past medical history
    • Attempt to communicate with the patient’s family and/or physician
    • COMPLETE medication reconciliation
    • Obtain preinjury chronic medical conditions and functional status
      • Cognitive impairment
      • Functional impairment
      • Nutritional status
      • Frailty score
Geriatric medication prescribing recommendations

- Discontinue nonessential medications
- Continue medications with withdrawal potential
- Continue β-blockers and statins if appropriate
- Adjust dosages for renal function based on GFR
- Use Beers Criteria in decision making about pharmacotherapy
AGS BEERS CRITERIA FOR POTENTIALLY INAPPROPRIATE MEDICATION USE IN OLDER ADULTS
FROM THE AMERICAN GERIATRICS SOCIETY

This clinical tool, based on The AGS 2012 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults (AGS-2012 Beers Criteria), has been developed to assist healthcare providers in improving medication safety in older adults. Our purpose is to inform clinical decision-making concerning the prescribing of medications for older adults in order to improve safety and quality of care.

Originally conceived in 1991 by the late Mark Beers, MD, a geriatrician, the Beers Criteria catalogues medications that cause adverse drug events in older adults due to their pharmacologic properties and the physiologic changes of aging. In 2011, the AGS undertook an update of the criteria, assembling a team of experts and funding the development of the AGS 2012 Beers Criteria using an enhanced evidence-based methodology, that criterion in renal (quality of evidence and strength of evidence) using the American College of Physicians’ Guideline Grading System, which is based on the GRADE scheme developed by Guyatt et al.

The full document together with accompanying resources can be viewed online at www.americangeriatrics.org.

INTENDED USE
The goal of this clinical tool is to improve care of older adults by reducing their exposure to Potentially Inappropriate Medications (PIMs).

This should be viewed as a guide for identifying medications for which the risk of use in older adults outweighs its benefits.

These criteria are not meant to supplant clinical judgment or individual patient’s values and needs. Prescribing and managing disease conditions should be individualized and involve shared decision-making.

These criteria also underscore the importance of using a team approach to prescribing and the use of non-pharmacologic interventions and of having economic and organizational incentives for this type of model.

Implicit criteria such as the STOPP/START criteria and Medication Appropriateness Index should be used in a complementary manner with the 2012 AGS Beers Criteria to guide clinicians in making decisions about safe medication use in older adults.

The criteria are not applicable in all circumstances (eg, patients receiving sedatives and hypnotics use). If a clinician is not able to find an alternative and chooses to continue to use a drug on this list in an individual patient, designation of the medication as potentially inappropriate can serve as a reminder for close monitoring so that the potential for an adverse drug effect can be incorporated into the medical record and prevented or decreased.}

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Effective pain management can improve pulmonary function, optimize mobility, and mitigate delirium

- Recommended pain medication strategies
  - Use elderly appropriate medications and dose
  - Avoid benzodiazepines
  - Monitor the use of narcotics; consider PCA
  - Consider use of non-narcotics including NSAIDS, adjuncts, and Tramadol
  - Epidural analgesia may be preferable for patients with multiple rib fractures to avoid respiratory failure
Patient Decision-Making Capacity and Care Preferences

• More than 40% of patients will require decision making near the end of life, 70% of those patients lack decision-making capacity

• The Geriatric Trauma Outcome Score is a tool based on data that can be used when addressing the families of geriatric trauma patients regarding the patient’s risk of mortality.
  • The score reports the risk of mortality as a continuous estimate
  • The variables involved are the patient’s ISS, age, and if the patient received PRBCs within the first 24 hours of admission
  • GTOS = age + (2.5  ISS) + 22 (if given any PRBC in the first 24 hours after injury)
    • A patient with a GTOS of 70 has a 1.5% chance of mortality
    • GTOS of 177=50% chance of mortality
    • GTOS of 233=90%, 252=95%, 310=99% chance of mortality
Patient Decision-Making Capacity and Care Preferences

- Discuss with family, surrogates, and the healthcare team and document in the medical record the following:
  - Priorities and preferences regarding treatment options
  - Advance directives or living will should be used to establish resuscitative status early in hospital stay
  - Identify decision maker
  - Make liberal use of palliative care options
  - Consider hospice when applicable
  - Hold a family meeting within 72hrs to discuss goals of care
Patient Decision-Making Capacity and Care Preferences

• Delirium is common in elderly patients after injury and is associated with increased morbidity and mortality
  • Consider a Mini-Cog
    • Instrument that can increase detection of cognitive impairment in older adults
    • Completed in 3 minutes
    • Includes a 3-item recall test for memory and a clock drawing test
Patient Decision-Making Capacity and Care Preferences

• Regularly address and treat delirium risk factors
  • Cognitive impairment and dementia
  • Depression
  • Alcohol use
  • Polypharmacy and/or psychotropic medications
  • Hearing and vision impairment
• Regularly monitor for reversible causes of delirium
  • Wake-sleep cycle disturbances and sleep deprivation
  • Immobilization
  • Infection/Uncontrolled pain
  • Renal insufficiency, dehydration, and electrolyte abnormalities
  • Urinary retention or presence of urinary catheter
  • Fecal impaction or constipation
  • Use of restraints
Patient Decision-Making Capacity and Care Preferences

- Protect patients from iatrogenic complications and functional decline
  - Early mobilization
  - Assess for fall risk and aspiration precautions
    - Elevate HOB
    - Sitting upright before and after meals
    - Swallow evaluation if needed
- Perform chest PT, IS, and deep breathing exercises
- Place on bowel regimen
- Pressure ulcer screening
Discharge Needs

• Studies show that up to 88% of seriously injured older patients fail to return to their previous level of independence and function, with many requiring long-term nursing home placement
Discharge Needs

• Assess the following discharge planning issues
  • Home environment, social support, possible need for medical equipment, and/or home health services
  • Patient acceptance/denial of nursing home or skilled nursing facility placement
Discharge Needs

• Provide the patient or caregiver with a written discharge documentation
  • Discharge diagnosis
  • Medications and clear dosing instructions
  • Directions for wound care
  • Instructions for diet and mobility
  • Need for PT/OT
  • Assist with establishing a primary care physician, specialty physician, or clinic
  • Clear documentation of incidental findings that mandate follow-up
Discharge Needs

• Provide the receiving facility with a discharge summary prior to patient’s departure from hospital along with verbal report.
• Arrange for home health visit or follow-up phone call within one to three days to assess:
  • Pain control
  • PO tolerance
  • Ability to ambulate
  • Mental status
  • Address any other post discharge questions or concerns
References


References cont’d.


UMC El Paso Trauma Registry, Nov 2016.
