Acute Coronary Syndrome in Octogenarians

Austin Smith, M.D.
Adjoint Assistant Professor of Emergency Medicine
Department of Emergency Medicine
Vanderbilt University School of Medicine
Nashville, TN

Attending Physician
Intermountain Park City Hospital and Heber Valley Hospital
Park City, Utah

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Clinical Communications: Adult

ACUTE CORONARY SYNDROME IN OCTOGENARIANS: EXPECT THE UNEXPECTED

Samuel T. Parnell, MD and Austin T. Smith, MD

Department of Emergency Medicine, Vanderbilt University Medical Center, Nashville, Tennessee
Reprint Address: Austin T. Smith, MD, Department of Emergency Medicine, Vanderbilt University Medical Center, 1313 21st Avenue, South, 703 Oxford House, Nashville, TN 37232-4700

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Outline

- Why this topic?
- Case
- Why this population?
- Importance
- Case

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Outline

- Multiple Registries/Cohort Studies will be discussed

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Why This Topic?

- 89 year old female sees her cardiologist who recommends a cath

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Case

- 83 year old female presents to the ED with a sore throat

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Case

- PMH
  - Hypertension
  - Hyperlipidemia
  - Type 2 DM
  - A fib (on Xarelto)
  - HFpEF

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Case

- States that "The thing that looks like a punching bag in the back of my throat" is burning

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Case

- States that "The thing that looks like a punching bag in the back of my throat" has a burning sensation and goes down to my shoulders
- Constant

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Case

- States that "The thing that looks like a punching bag in the back of my throat" has a burning sensation and goes down to my shoulders
- Constant
- No shortness of breath, chest pain, or any other symptoms

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Case

- Completely normal physical exam
  - Including oropharynx

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Case

- Workup?

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Case

- Workup?
  - Patient suffers from a lack of history
  - Multiple comorbidies

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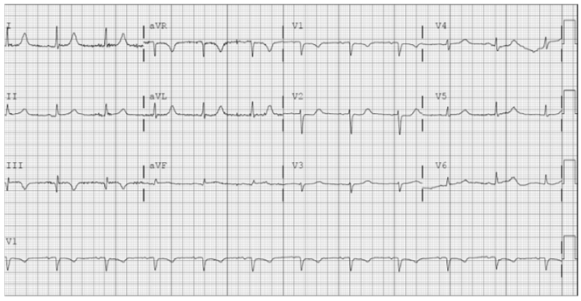

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Case

- Labs: Normal CBC, BMP

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Case

- Troponin I: 28.04ng/mL (Upper limit 0.03ng/mL)

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Case

- Admitted to cardiology

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Case

- Admitted to cardiology
- Anticoagulated
- Cath lab: 70% mid LAD, 95% RCA
  - 2 stents placed
  - Discharged 2 weeks later

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Why this topic?

- Octogenarians are one of the most heterogenous populations

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Why this topic?

- Octogenarians are one of the most heterogenous populations
- They are also trying to trick you

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Southern Octogenarian

Photo Courtesy Wiki Commons

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Park City Octogenarian

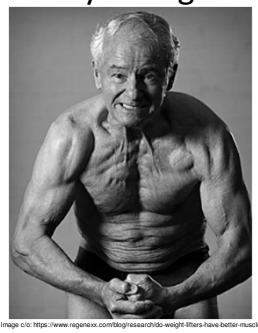

Image c/o: https://www.regenexx.com/blog/research/do-weight-lifters-have-better-muscle-stem-cells/

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Anecdotal?

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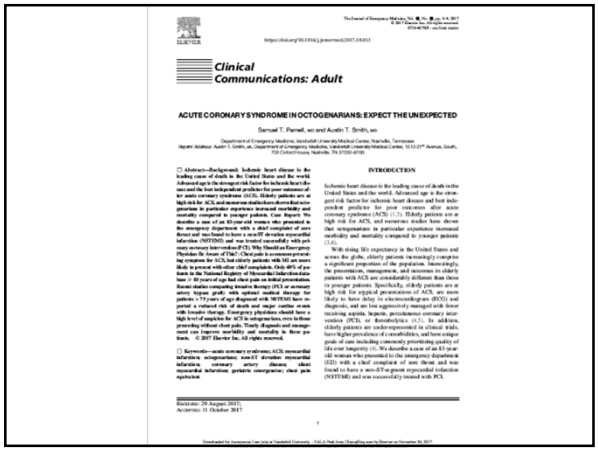

Clinical Communications: Adult

ACUTE CORONARY SYNDROME IN OCTOGENARIANS: EXPECT THE UNEXPECTED

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Incidence

- Ischemic heart disease is the leading cause of death in US and the world

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Importance

- Advanced age is the strongest risk factor for ischemic heart disease

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Importance

- Advanced age is the strongest risk factor for ischemic heart disease
- Advanced age is the strongest independent predictor for poor outcomes

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Presentations

- Elderly patients are at high risk of atypical presentations of ACS

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Presentations

- Elderly patients are at high risk of atypical presentations of ACS
- GRACE ACS Registry:
  - Atypical Presentations: 72.9 years of age
  - Typical Presentations: 65.8 years of age

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Presentations

- NRMI database (> 430,000 patients): 1/3 patients with MI did not have chest pain

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Presentations

- NRMI database (> 430,000 patients): 1/3 patients with MI did not have chest pain
- Those without chest pain were on average 7 years older than those with chest pain

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Presentations

- Patients < 65 in the NRMI database:
  - 77% had chest pain

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Presentations

- Patients < 65 in the NRMI database:
  - 77% had chest pain
- Octogenarians in the NRMI database
  - Only 40% had chest pain

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Summary so far

- Age is predictive of ACS and bad outcomes

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Summary so far

- Age is predictive of ACS and bad outcomes
- Chest pain is ATYPICAL as you get older

38

Presentations

- If no chest pain, how do they present?
  - Dyspnea (49%)

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Presentations

- If no chest pain, how do they present?
  - Dyspnea (49%)
  - Diaphoresis (26%)

40

Presentations

- If no chest pain, how do they present?
  - Dyspnea (49%)
  - Diaphoresis (26%)
  - Nausea/Vomiting (24%)

41

Presentations

- If no chest pain, how do they present?
  - Dyspnea (49%)
  - Diaphoresis (26%)
  - Nausea/Vomiting (24%)
  - Syncope (19%)

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Presentations

- How about ECGs?

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Presentations

- ECGs in octogenarians: Less likely to demonstrate significant ST-segment changes

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Presentations

- Framingham Cohort
  - Silent MIs 25% in all patients

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Presentations

- Framingham Cohort
  - Silent MIs 25% in all patients
  - **60% of MIs in patients >85 years of age**

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Presentations

- As a result
  - Delayed ECGs
  - Delayed Diagnosis

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Presentations

- Outcomes?

48

Outcomes

- No chest pain:

49

Outcomes

- No chest pain:
  - Longer delay before hospital presentation (7.9 hours vs 5.3 hours)

50

Outcomes

- No chest pain:
  - Longer delay before hospital presentation
  - Less likely to be diagnosed with MI at time of admission (22.2% vs 50.3%)

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Outcomes

- No chest pain:
  - Longer delay before hospital presentation
  - Less likely to be diagnosed with MI at time of admission
  - Less likely to receive thrombolysis or angioplasty (25.3% vs 74.0%)

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Outcomes

- No chest pain:
  - Longer delay before hospital presentation
  - Less likely to be diagnosed with MI at time of admission
  - Less likely to receive thrombolysis or angioplasty
  - Less likely to receive ASA (60.4% vs 84.5%)

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Outcomes

- No chest pain:
  - Longer delay before hospital presentation
  - Less likely to be diagnosed with MI at time of admission
  - Less likely to receive thrombolysis or angioplasty
  - Less likely to receive ASA
  - Threefold risk of in-hospital mortality

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Outcomes

- Those with MI without chest pain:
  - 23.3% in-hospital mortality rate
  - WITH chest pain: 9.3% mortality rate

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Outcomes

- Less Aggressively Managed
  - Fewer receive ASA, Heparin, PCI/thrombolysis

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Outcomes

- ACS-related complications increase with age
  - Bleeding
  - Infection
  - Heart Failure
  - Renal Failure
  - Stroke

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Treatment

- How do we treat them?

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Treatment

- Literature in elderly patients is limited

59

Treatment

- Literature in elderly patients is limited
- Invasive vs. Medical Therapy in patients >75:

60

Treatment

- Literature in elderly patients is limited
- Invasive vs. Medical Therapy in patients >75:
  - STEMI: mortality and morbidity benefit with invasive approach

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Treatment

- Literature in elderly patients is limited
- Invasive vs. Medical Therapy in patients >75:
  - STEMI: mortality and morbidity benefit with invasive approach
  - NSTEMI: mortality and morbidity benefit with invasive approach

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Treatment

- Literature in elderly patients is limited
- Invasive vs. Medical Therapy in patients >75:
  - STEMI: mortality and morbidity benefit with invasive approach
  - NSTEMI: mortality and morbidity benefit with invasive approach
  - There is a slightly increased risk of bleeding during invasive revascularization in the elderly population

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Future

- Literature in octogenarians is limited

64

Future

- Literature in octogenarians is limited
- Life expectancy in US is increasing

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Future

- Literature in octogenarians is limited
- Life expectancy in US is increasing
  - For those that make it to 80
    - Men: average of 8.2 more years
    - Women: average of 9.6 more years

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Case

- Sore throat?
  - Actually not terribly uncommon presenting symptom

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Case

- Autonomic dysfunction of the pharyngeal branch of vagus nerve that innervates pharyngeal constrictors

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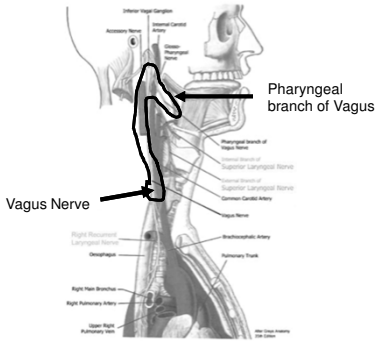

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Case

- Occlusion of RCA has been hypothesized to damage parasympathetic fibers of vagus

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Takeaways

- Elderly patients present with different symptoms

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Takeaways

- Elderly patients present with different symptoms
- Octogenarians are a heterogenous population

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Takeaways

- Elderly patients present with different symptoms
- Octogenarians are a heterogenous population
- Treatment options should take into account
  - Clinical Presentation
  - Coronary Anatomy
  - Frailty
  - Comorbidities
  - Quality of Life Improvement

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Summary

- It's more common
- They present differently (and get missed)
- They do worse
- They get treated differently

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