



<https://doi.org/10.1016/j.jemermed.2017.10.013>

## 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 21<sup>st</sup> Avenue, South, 703 Oxford House, Nashville, TN 37232-4700

□ **Abstract—Background:** Ischemic heart disease is the leading cause of death in the United States and the world. Advanced age is the strongest risk factor for ischemic heart disease and the best independent predictor for poor outcomes after acute coronary syndrome (ACS). Elderly patients are at high risk for ACS, and numerous studies have shown that octogenarians in particular experience increased morbidity and mortality compared to younger patients. **Case Report:** We describe a case of an 83-year-old woman who presented to the emergency department with a chief complaint of sore throat and was found to have a non-ST elevation myocardial infarction (NSTEMI) and was treated successfully with primary coronary intervention (PCI). **Why Should an Emergency Physician Be Aware of This?:** Chest pain is a common presenting symptom for ACS, but elderly patients with MI are more likely to present with other chief complaints. Only 40% of patients in the National Registry of Myocardial Infarction database  $\geq 85$  years of age had chest pain on initial presentation. Recent studies comparing invasive therapy (PCI or coronary artery bypass graft) with optimal medical therapy for patients  $> 75$  years of age diagnosed with NSTEMI have reported a reduced risk of death and major cardiac events with invasive therapy. Emergency physicians should have a high level of suspicion for ACS in octogenarians, even in those presenting without chest pain. Timely diagnosis and management can improve morbidity and mortality in these patients. © 2017 Elsevier Inc. All rights reserved.

□ **Keywords—**acute coronary syndrome; ACS; myocardial infarction; octogenarians; non-ST elevation myocardial infarction; coronary artery disease; silent myocardial infarction; geriatric emergencies; chest pain equivalent

#### INTRODUCTION

Ischemic heart disease is the leading cause of death in the United States and the world. Advanced age is the strongest risk factor for ischemic heart disease and best independent predictor for poor outcomes after acute coronary syndrome (ACS) (1,2). Elderly patients are at high risk for ACS, and numerous studies have shown that octogenarians in particular experience increased morbidity and mortality compared to younger patients (3,4).

With rising life expectancy in the United States and across the globe, elderly patients increasingly comprise a significant proportion of the population. Interestingly, the presentation, management, and outcomes in elderly patients with ACS are considerably different than those in younger patients. Specifically, elderly patients are at high risk for atypical presentations of ACS, are more likely to have delay in electrocardiogram (ECG) and diagnosis, and are less aggressively managed with fewer receiving aspirin, heparin, percutaneous coronary intervention (PCI), or thrombolytics (4,5). In addition, elderly patients are under-represented in clinical trials, have higher prevalence of comorbidities, and have unique goals of care including commonly prioritizing quality of life over longevity (4). We describe a case of an 83-year-old woman who presented to the emergency department (ED) with a chief complaint of sore throat and was found to have a non-ST-segment myocardial infarction (NSTEMI) and was successfully treated with PCI.

RECEIVED: 29 August 2017;

ACCEPTED: 11 October 2017

## CASE REPORT

An 83-year-old female with a past medical history of hypertension, hyperlipidemia, type 2 diabetes mellitus, paroxysmal atrial fibrillation, and heart failure with preserved ejection fraction presented to the ED with a chief complaint of sore throat. The patient reported that she had been experiencing a sore throat for 2 days. She described the pain as a burning sensation located in the uvula that radiated into her throat and down to her neck and bilateral shoulders. She rated the pain as 9 out of 10 and stated it was constant and not associated with swallowing, talking, exertion, or food intake. Her review of systems was otherwise negative. Specifically, she denied cough, chest pain, shortness of breath, fever, chills, nausea, vomiting, or abdominal pain.

On initial examination, the patient had normal vital signs and appeared comfortable. Physical examination revealed no focal neurologic deficit and the oropharynx was clear without erythema, exudate, tonsillar hypertrophy, or uvula deviation. Pulmonary examination was significant for bibasilar crackles, and cardiac examination had normal rate and regular rhythm without extra heart sounds and with equal 2+ radial pulses.

Given the unclear etiology of the patient's symptoms, her normal oropharyngeal examination, and the radiation of pain to her shoulders, an ECG and cardiac biomarkers were ordered, along with a complete blood count and basic metabolic profile. The ECG (Figure 1) showed normal sinus rhythm with rate of 69 beats/min, normal axis, Q wave and inverted T wave in III, and a sinus pause. There was no significant ST elevation or depression, and comparison to ECG from a month earlier showed no significant changes.

Additional diagnostic testing included chest x-ray study, which showed mild cardiomegaly with mild vascular congestion. Notable laboratory results included troponin-I of 28.04 ng/mL (reference  $\leq 0.03$  ng/mL) with repeat 3 h later of 26.05 ng/mL. Repeat ECG obtained 1 h after initial ECG showed no new ST changes or new T-wave inversions. Electrolytes were significant for creatinine of 1.55 mg/dL, which was up from patient's baseline of 1.2 mg/dL. The patient's brain natriuretic peptide was also elevated at 669 pg/mL (reference 90–100 pg/mL) with previously normal baseline. The remainder of her laboratory results were unremarkable.

The patient was treated with aspirin, clopidogrel, and heparin and admitted to the cardiology service for acute NSTEMI. During hospitalization, the patient had cardiac catheterization that revealed 70% mid-left anterior descending (LAD) occlusion and 95% mid-right coronary artery (RCA) occlusion. The patient had drug-eluting stents placed in the mid LAD and mid RCA. Her hospital course was complicated by acute kidney injury attributed

to contrast-induced nephropathy. She was discharged home in stable condition after a 15-day hospital admission to a skilled nursing facility for further rehabilitation due to deconditioning.

## DISCUSSION

ACS in the elderly, specifically in octogenarians, can be a challenging diagnosis to make, and treatment is controversial. Elderly patients are less likely to have typical presentations of ACS, and ECG findings are less likely to demonstrate significant ST-segment changes compared to younger patients (4,6). In a review of > 430,000 patients with MI from the National Registry of Myocardial Infarction (NORMI) database, one-third of all patients diagnosed with MI did not present with a complaint of chest pain (5). Notably, patients presenting without chest pain that were determined to have MI were, on average, 7 years older than those with chest pain (74.2 vs. 66.9 years) (5). Patients with MI who presented without chest pain had a longer delay before hospital presentation (mean 7.9 h vs. 5.3 h), were less likely to be diagnosed with MI at the time of admission (22.2% vs. 50.3%), and were less likely to receive thrombolysis or primary angioplasty (25.3% vs. 74.0%), aspirin (60.4% vs. 84.5%),  $\beta$ -blockers (28.0% vs. 48.0%), or heparin (53.4% vs. 83.2%) (5). Not surprisingly, patients with MI who presented without chest pain on presentation had a 23.3% in-hospital mortality rate compared with 9.3% among patients with acute chest pain (5).

Sore throat, although rare, has been reported as a symptom of ACS in the literature (7,8). The referred pain causing sore throat is thought to be due to autonomic dysfunction of the pharyngeal branch of the vagus nerve that innervates the pharyngeal constrictors (8). Occlusion of the RCA has been hypothesized to damage parasympathetic fibers of the vagus and cause referred throat pain in cardiac ischemia (8).

## WHY SHOULD AN EMERGENCY PHYSICIAN BE AWARE OF THIS?

Elderly patients are at high risk for atypical presentations of ACS, defined as the absence of chest pain, and are more likely to present with NSTEMI than STEMI (6). In the Global Registry of Acute Coronary Events registry, the mean age of patients with atypical symptoms of ACS was 72.9 years compared to 65.8 years for patients with typical symptoms of ACS (9). Only 40% of patients in the NORMI database  $\geq 85$  years of age had chest pain on initial presentation, whereas 77% of patients < 65 years old had chest pain on initial presentation (6). Chest pain is a common presenting symptom for ACS, but elderly

Download English Version:

<https://daneshyari.com/en/article/8719641>

Download Persian Version:

<https://daneshyari.com/article/8719641>

[Daneshyari.com](https://daneshyari.com)