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*CORRESPONDING AUTHOR:
Emily Clarke, Department of Emergency Medicine, Penn State Hershey Medical Center, USA, Email: eclarke@pennstatehealth.psu.edu

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Case Report

Case of a STEMI presenting with Belching

Emily Clarke* and J Elizabeth Neuman

Department of Emergency Medicine, Penn State Hershey Medical Center, USA

Abstract

Introduction: Acute coronary syndrome is a leading cause of death in the United States. Less common presenting symptoms occur however, and some patients may present with complaints that initially seem unrelated to cardiac disease.

Case: A 65-year-old male presented to the Emergency Department with 1 month of intermittent belching, acutely worsened just before presentation with associated epigastric fullness. EKG revealed ST-Elevation-Myocardial Infarction (STEMI). Patient was taken to the cardiac catheterization lab and had placement of drug-eluting stent, after which he had no more episodes of belching.

Discussion: This case demonstrates the importance of the ability of physicians to consider uncontrollable belching, in the absence of chest pain, as a possible symptom of myocardial ischemia. This unusual presentation of acute STEMI leads us to question how many patients may have presented this way and not had their disease recognized due to a presumed gastrointestinal cause for their belching.

Introduction

Acute coronary syndrome is a leading cause of death among US adults, with the majority of patients presenting with chest pain [2]. Atypical presenting symptoms are common among certain patient populations, a fact of which all Emergency Physicians are aware. Here we describe a case of a patient who presented to the Emergency Department (ED) with uncontrollable belching, ultimately found to be a presenting symptom of acute STEMI.

Case Report

A 65 year-old male with a past medical history of uncontrolled hypertension presented to the ED with a one-month history of belching, which acutely worsened just prior to presentation. He described the belching as constant and uncontrollable with no aggravating or alleviating factors, and also admitted to experiencing associated epigastric pressure. He noted that the associated epigastric pressure had never been this severe before, and seemed to worsen with the increase in his belching shortly before arrival. He had no previous exertional component to his symptoms. He was a non-smoker with a paternal history of coronary artery disease (his father had an MI in his mid-50's). He appeared uncomfortable on exam and was loudly belching throughout his examination. His extremity pulses were equal throughout and his cardiac exam was regular rhythm with no murmurs, and he had clear breath sounds bilaterally. He was hypertensive but not tachycardic. The remainder of his clinical assessment including full physical exam, medication history and social history were unremarkable. While the ED physician was obtaining this history in the room, ST elevations were noted on the monitor and a stat EKG was requested which was remarkable for inferior ST elevation with anterior reciprocal ST depression. A STEMI alert was activated and the patient was given aspirin, clopidogrel, nitroglycerin and a heparin drip (after chest x-ray ruled out mediastinal widening). He was taken emergently to the cardiac catheterization lab by the Cardiology team and was found to have 100% thrombotic occlusion of OM1. A drug-eluting stent was placed

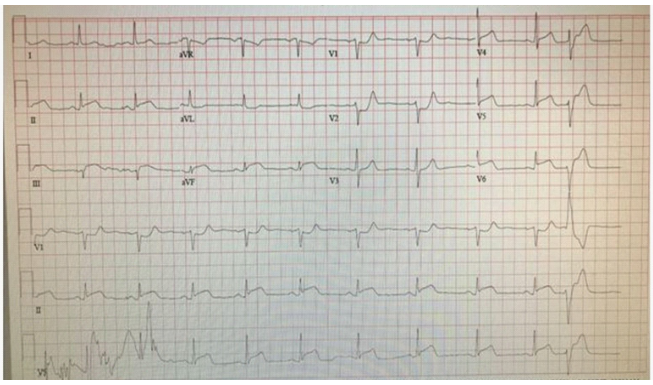

Figure 1: Presenting EKG.

without complications. After the procedure the patient remained hemodynamically stable and his belching resolved. After a 3-day stay for further monitoring, he was discharged to home. Telephone follow-up with the patient after stent placement confirmed that the patient remained asymptomatic and had no further episodes of belching after intervention.

Discussion

Chest pain is one of the most common presenting complaints to the emergency department, for which approximately 8 million patients seek care in the ED every year [2]. Acute Coronary Syndrome (ACS) can be classified as either acute ST-segment elevation myocardial infarction (STEMI) versus non-ST-segment elevation myocardial infarction (NSTEMI), or acute ischemia (unstable angina). For the emergency physician attempting to exclude acute coronary syndrome as the cause of a patient's symptoms, it is important to consider that a wide variety of symptoms, typical and atypical, can be presentations of acute cardiac ischemia. While the most common symptom of ischemic heart disease is chest discomfort or pain, less classic ACS presentations are notorious in patients with advanced age, history of diabetes mellitus, or in females [2]. Atypical symptoms include but are not limited to: fatigue, weakness, and vague gastrointestinal complaints. Despite a myriad of documented atypical presentations of cardiac ischemia, belching appears to be an extremely rare presenting symptom of ACS. Review of prior literature revealed to our knowledge only 2 published case reports describing a similar presentation, neither of which was in the United States. In the first case, a 63 year-old male presented with two months of belching during exertion and was found to have a positive stress electrocardiogram. He underwent coronary catheterization, with subsequent coronary artery bypass grafting and was reported to remain asymptomatic since the intervention [1]. In this case, the patient denied any chest discomfort, with his only presenting symptom being exertional belching proposed to be vagally mediated. The second case report describes an 83-year-old Hungarian woman who presented with four separate episodes of loud, uncontrollable belching, also with positive angiography and symptom resolution after cardiac intervention [3]. Both of these described cases, in conjunction with the case described above, demonstrate the importance of considering uncontrollable belching, with or without the presence of chest pain, as a possible symptom of myocardial ischemia. Further investigation could be useful to demonstrate the exact pathophysiology behind this unusual presenting symptom.

Conclusion

Acute coronary syndrome is a common syndrome diagnosed in the Emergency Department, typically presenting with chest pain. Remembering there are many atypical presenting symptoms of angina, physicians should not necessarily attribute uncontrollable belching to a gastrointestinal etiology, and should consider obtaining a 12 lead electrocardiogram in the evaluation process.

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