

Diarrhea as Atypical Symptom of Acute Myocardial Infarction

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ABSTRACT

Acute myocardial infarction (AMI) is commonly known to be presented with chest pain, radiated to the left arm, neck or jaw. However, many cases were documented to be presented with atypical symptoms. One of the rarest presentations of AMI is diarrhea. We were reporting a case of a 55-year gentleman who was complaining of diarrhea without chest pain, found to have an inferior myocardial infarction (MI) by routine ECG. No, any other cardiac symptoms were found. This highlights that diarrhea can be the only presenting symptom of acute MI which likely to be missed. The importance of knowing the presenting symptom of AMI will help a lot in giving the best management to the patient during the golden hours of the hospital arrival, which might be life-saving.

Keywords: Acute myocardial infarction, Diarrhea, Atypical symptoms.

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INTRODUCTION

AMI is commonly presented with typical symptoms of chest pain which may be associated with nausea and vomiting [1]. However, several studies concluded that 20%–33% of AMI cases were presented with atypical symptoms [2, 3]. These cases were susceptible to delay in management and have a higher rate of death [2, 3]. We reported a very rare case of a 55-year-old man complained from diarrhea as an atypical presentation of AMI, which will highlight one of an uncommon and neglected manifestation of AMI. The research approved by the College of Medicine, University of Anbar. And informed consent was taken from the patient.

CASE PRESENTATION

A 55-year-old gentleman, He was a known case of diabetes mellitus and dyslipidemia controlled by (metformin tablet 500 mg twice daily, atorvastatin tablet 20 mg once daily) for 3 years. He was a heavy chronic cigarette smoker (one pack per day for 25 years). He had neither a history of hypertension nor congestive heart disease.

He presented to the emergency room of Al-Ramadi Teaching Hospital complaining of urgency to defecate with loose stool (three episodes during the last two hours), the stool was watery with no blood or any offensive odor. The diarrhea associated with mild lower abdominal pain dull in nature, not radiating to anywhere else and not relieved by defecation. The pain was associated with nausea. The patient denied any other symptoms.

On examination, Blood pressure 121/81 mmHg, heart rate 84 beats/minute, respiratory rate 15 respirations/minute, temperature 36.2 Celsius and SpO₂ 98%. Cardiovascular examination showed normal S₁, S₂, no murmur was heard. His chest was clear on auscultation, neither rhonchi nor crepitation was detected. His abdomen was soft, no tenderness, rebound tenderness or organomegaly were found, and the bowel sounds were normal.

Accordingly, gastroenteritis was suspected and sent for routine investigations including [complete blood count, general stool analysis, comprehensive metabolic panel and electrocardiogram (ECG)]. Surprisingly, the ECG showed ST elevation in the inferior leads II, III, aVF with reciprocal ST depression in leads I, aVL (inferior wall infraction) with the prominence of the R wave in leads V1-V3 with downslope ST depression and T wave inversion (possible posterior wall involvement) Figure 1. Then sent to do cardiac troponin to prove the diagnose of AMI and found very high cardiac troponin (Troponin T: 1789 ng/ml, positive upper limit 15ng/ml). Immediately,

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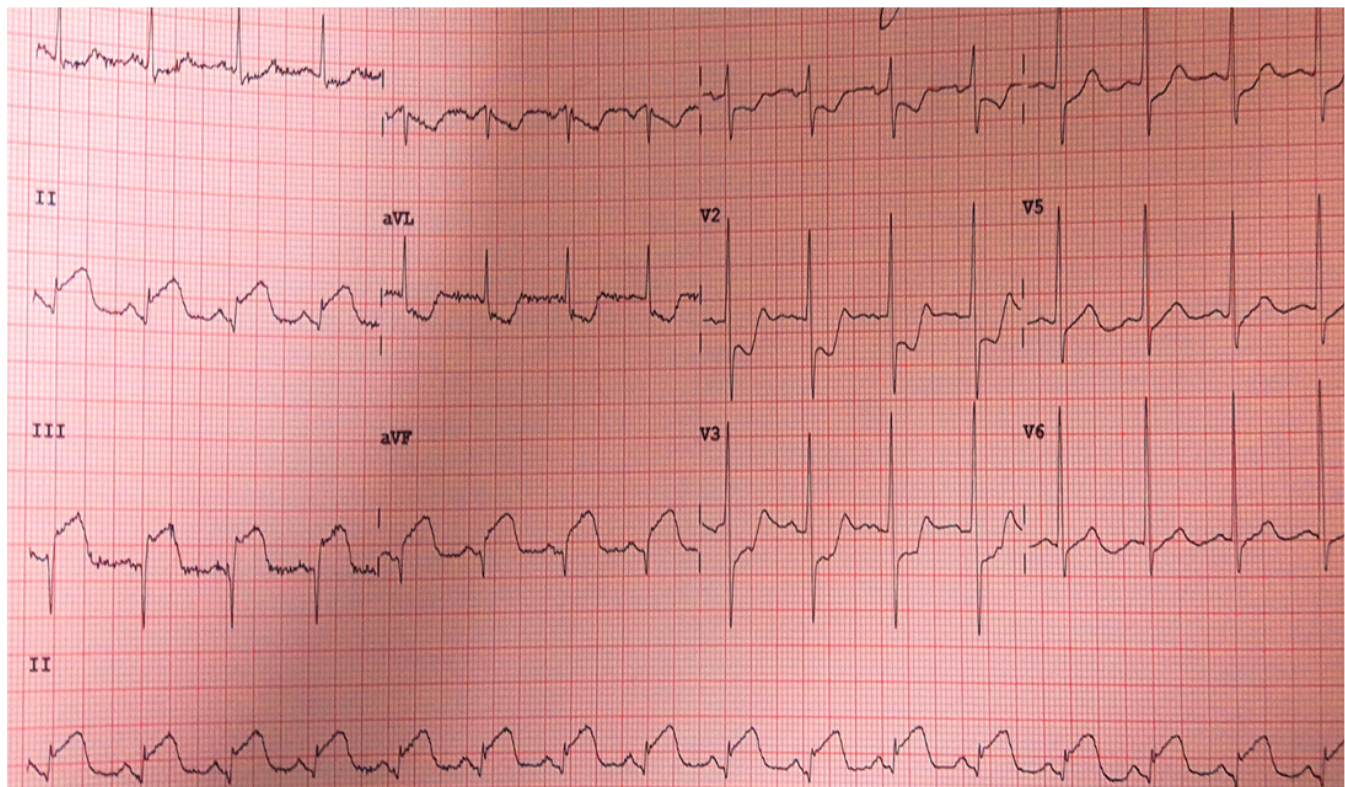


Figure 1. ECG of 55-year-old man, showing ST elevation in all (inferior wall) leads with prominent R in the waves in leads V1-V3 and ST depression with T wave inversion (posterior wall).

we admitted the patient in the cardiac care unit, and management started with (clopidogrel tablet 300 mg, aspirin tablet 300 mg, heparin Bolus dose 4000 IU, and tenticplase 45 mg intravenous). During patients' admission, close follow-up and management were taken. Diarrhea was stopped on the same day of his admission. The patient discharged later, after stabilization and arranged for a coronary angiography as an outpatient.

DISCUSSION

The usual presentation of AMI in most patients is severe central chest pain, tightness in character, the pain radiated to the neck, lower jaw, and left arm. It also may be associated with nausea and vomiting especially if the inferior wall is affected by the infarction. Other usual or typical symptoms include palpitations, shortness of breath, sweating, cold perspiration, generalized weakness, dizziness, and syncope [[1, 4, 5].

In 2005 Chowta and his team, studied the various modes of presentations of AMI on 60 patients admitted to the hospital with AMI. They found that 20% of them were presented with atypical symptoms, and nearly 50% of those with atypical symptoms were having an inferior wall infarction [2]. These atypical presentations including patients who did not express any chest pain on presentation of AMI are at increased risk for delay in attention, less aggressive treatments, and in-hospital mortality [3]. That was shown by their higher percentage of death 33.3% vs 16.6% in those presented with typical symptoms [2]. In 1976 Schreeder and Hardison, re-

ported within two years, six cases of whom urgent defecation or diarrhea were either the initial or prominent symptoms of electrocardiogram-documented AMI. These symptoms occurred with and/or without associated nausea and vomiting [6]. As a consequence, Chaim and Rosenthal in 1982, in their prospective study on 350 inpatient admissions for AMI, they work to register the accurate frequency and the unusual presentations include diarrhea and urgency to defecate. The study revealed that 13 subjects complained from diarrhea and urgency to defecate during their attacks of AMI [7].

In 1972, Weeb and his team concluded from their study on 74 patients, that 92% of them developed signs of autonomic imbalance within 30 minutes of the onset of AMI, and excessive vagal activity was evident in 55% of those patients [8].

While we did not find recent theory in the literature explaining the underlying cause of diarrhea associated with AMI, we highly recommend interested researchers to do more studies on this rare presentation of AMI.

CONCLUSION

This case report revealed an uncommon presentation of AMI, which; if did not take in consideration, will result in a delay in patient management. Furthermore, it highlights that chest pain, which is counted as the cardinal symptom to diagnose AMI, may not be present.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

REFERENCES

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- [1] Y. S. Chatzizisis, P. Saravakos, A. Boufidou and D. Parharidou, and I. Styliadis. Acute myocardial infarction manifested with headache. *Open Cardiovasc. Med. J.*, 4:148, 2010.
- [2] K. N. Chowta, P. D. Prijith, and M. N. Chowta. Modes of presentation of acute myocardial infarction. *Indian J Crit Care Med*, 9(3):151–154, 2005.
- [3] J. G. Canto et al. Prevalence, clinical characteristics, and mortality among patients with myocardial infarction presenting without chest pain. *Jama*, 283(24):3223–3229, 2000.
- [4] E. M. Antman. Acute myocardial infarction in: Braunwald e, zipes d, libby p, eds. *Hear. Dis. Ed A Textb. Cardiovasc. Med. Philadelphia WB Saunders Co.*, pages 1131–1135, 2001.
- [5] E. M. Antman. Time is muscle: translation into practice. *J. Am. Coll. Cardiol.*, 52(15):1216–1221, 2008.
- [6] M. Schreeder and J. Hardison. Chezosisus and defecation: symptoms of acute myocardial infarction. *Ann. Intern. Med.*, 84(4):447, 1976.
- [7] J. Chaim and T. Rosenthal. Diarrhoea and urgency to defaecate in acute myocardial infarction. *Lancet*, 319(8274):746, 1982.
- [8] S. W. Webb, A. A. J. Adgey, and J. F. Pantridge. Autonomic disturbance at onset of acute myocardial infarction. *Br Med J*, 3(5818):89–92, 1972.