

CASE REPORT

Chronic ischemia in Left anterior descending artery territory presenting as intractable hiccups: An unusual symptom of coronary artery disease.

Shahsawar Khan , Adnan Khan  & Syed Abid Habib

Hayatabad Medical Complex, Peshawar-Pakistan.

Copyright © The Author(s). 2022 This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.



Citation:

Khan S, Khan A, Habib SA. Chronic ischemia in Left anterior descending artery territory presenting as intractable hiccups: An unusual symptom of coronary artery disease. *PJCVI*. 2022; 2(2): 77-79

Corresponding Author Email:

dr.adnan34@gmail.com

DOI: 10.58889/PJCVI.3.77.79

Funding:

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflicts of Interests:

The authors have declared that no competing interests exist.

Received 16/08/2022

Accepted 02/11/2022

First Published 01/12/2022

Abstract

Classical symptoms of ischemic heart disease include exertional chest pain associated diaphoresis, palpitations or shortness of breath. Yet, it can also present unusually with symptoms ranging from epigastric discomfort, fatigue and vomiting. A 48 years old male presented to the hospital with severe retrosternal chest pain for 6 hours duration. ECG showed acute anterior wall STEMI. Primary PCI to LAD was performed successfully. He had been complaining of intractable hiccups for the past one year for which he had been seen in gastroenterology clinics multiple times with no relief in hiccups. After we performed primary PCI to LAD, he had complete resolution of hiccups. He is still under regular follow up with us for the past 4 months with no active complaints of hiccups. This case conclude that Intractable hiccups can be the only symptomatic manifestation of coronary artery disease (CAD) in some patients. Therefore, a high suspicion of CAD should be kept in mind especially in patients with risk factors for CAD.

Keywords

Case Report, Acute Coronary Syndrome, Intractable Hiccups, STEMI, Unusual Presentation of CAD.

Introduction

Classical symptoms of ischemic heart disease include exertional chest pain associated diaphoresis, palpitations or shortness of breath. Yet, it can also present unusually with symptoms ranging from epigastric discomfort, fatigue and vomiting.

Case Presentation

A 48-year-old male presented to us with history of retrosternal chest pain for 6 hours duration associated with diaphoresis and dyspnea. His initial ECG showed acute anterior wall myocardial infarction. He underwent successful primary PCI to the LAD with a drug eluting stent. He had a past history of hypertension and family history of premature CAD. He was on ramipril 5 mg tablet for hypertension.

He had earlier presented to the hospital multiple times with complaints of intractable hiccups for the past one year where he had been seen by gastroenterologist and upper GI endoscopy performed which was normal. The hiccups had not been relieved with all the usual medications

prescribed by the gastroenterologist. According to the patient, these hiccups have been so irritating and distressful that he had contemplated suicide. His social and personal life had been negatively affected over the past one year due to the said problem.

After successful primary PCI was performed, he was discharged 2 days later and came back for follow up visit to the hospital clinic after 2 weeks. He is under regular follow up in the clinic with us over the past 4 months and he had not complained of hiccups again. His quality of life has been significantly improved and is otherwise stable. His echocardiogram at follows up shows an ejection fraction of 51 % with apical hypokinesia of the left ventricle.

He had a culprit lesion in proximal LAD and underwent successful primary PCI to the proximal LAD segment with a drug eluting stent as shown in figure 1 and 2. He is on dual antiplatelet therapy including aspirin 150 mg and clopidogrel 75 mg. In addition, he is receiving rosuvastatin 20 mg, bisoprolol 5 mg and ramipril 5 mg daily.

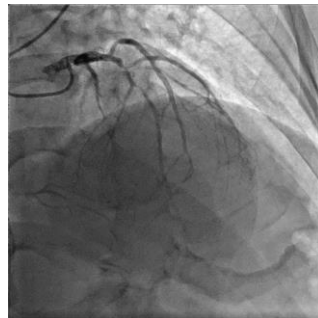


Figure 1: Coronary Angiogram showing significant stenosis in proximal LAD

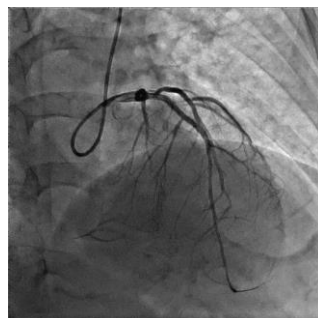


Figure 2: After successful PCI to LAD with a drug eluting stent

Management & Results

Generally, hiccups are caused by gastroenterological problems in about 62 % of the patients and these patients usually present to the gastroenterology clinics¹. We present this case

Discussion

Causes of hiccups vary from phrenic and vagal nerve irritations to gastric abnormalities and cancer of the thoracic region but cases have previously been reported of coronary artery disease presenting with intractable hiccups^{2,3,4}. After a detailed review of the available literature, we found that chronic ischemic heart disease, ST elevation MIs and even non-ST elevation MIs have been reported to present with hiccups. One study even reported the association of ischemia in the left anterior descending artery and right coronary artery regions to hiccups^{5,6,7}. Our patient had a non-culprit lesion in RCA which was not revascularised in the index hospitalization, but he reported relief in his hiccups at follow up. We staged PCI to RCA 2 months later.

Some of the plausible explanations reported in literature for the association of hiccups with LAD and RCA stenosis have been the irritation of phrenic and vagus nerves due to the close proximity of these nerves with LAD and RCA⁸. Others have gone on to suggest that ischemia in the LAD territory can result in release of metabolites from the ischemic cells which in turn cause irritation in these nerves resulting in hiccups⁶. But still, no conclusive explanation exists as to what causes hiccups in myocardial ischemia.

Conclusion

In light of this case, we would like to conclude that cardiologists should have a low threshold for ischemic heart disease diagnosis and workup in patients who present with hiccups especially if they have multiple risk factors for ischemic heart

report because the patient reported relief in his hiccups after successful primary PCI to the LAD to our surprise, a very unusual phenomenon. Moreover, he was not diagnosed with ischemic heart disease earlier due to the unusual presentation of his illness.

Our patient had hypertension and family history of premature CAD

Acknowledgment

The authors are thankful to the hospital administration and staff for the clinical support.

References

- 1) De Hoyos A, Esparza EA, Cervantes-Sodi M. Non-erosive reflux disease manifested exclusively by protracted hiccups. *Journal of neurogastroenterology and motility*. 2010 Oct;16(4):424.
- 2) Fass R, Higa L, Kodner A, Mayer EA. Stimulus and site specific induction of hiccups in the oesophagus of normal subjects. *Gut*. 1997 Nov 1;41(5):590-3.
- 3) Cajoto V. Hiccup: review of 24 cases. *Revista Medica de Chile*. 2007 Sep 1;135(9):1132-8.
- 4) Redondo-Cerezo E, Viñuelas-Chicano M, Pérez-Vigara G, Gómez-Ruiz CJ, Sánchez-Manjavacas N, Jimeno-Ayllon C, Pérez-Sola A. A patient with persistent hiccups and gastro-oesophageal reflux disease. *Gut*. 2008 Jun 1;57(6):763-.
- 5) Gao H, Zhang B, Song L, Yao S, Zhang Z, Bai M. Acute proximal left anterior descending thrombosis manifested by persistent hiccups: A case report. *Medicine*. 2019 Nov;98(48).
- 6) Shaikh N, Raj R, Movva S, Mattina C. Persistent hiccups as the only presenting symptom of ST elevation myocardial infarction. *Case reports in cardiology*. 2018 Mar 11;2018.
- 7) Zhang F, Tongo ND, Hastings V, Kanzali P, Zhu Z, Chadow H, Rafii SE. ST-segment elevation myocardial infarction with acute stent thrombosis presenting as intractable hiccups: an unusual case. *The American journal of case reports*. 2017;18:467.
- 8) Krysiak W, Szabowski S, Stepień M, Krzywkowska K, Krzywkowski A, Marciniak P. Hiccups as a myocardial ischemia symptom. *Polskie Archiwum Medycyny Wewnetrznej*. 2008 Mar 1;118(3):148-51.