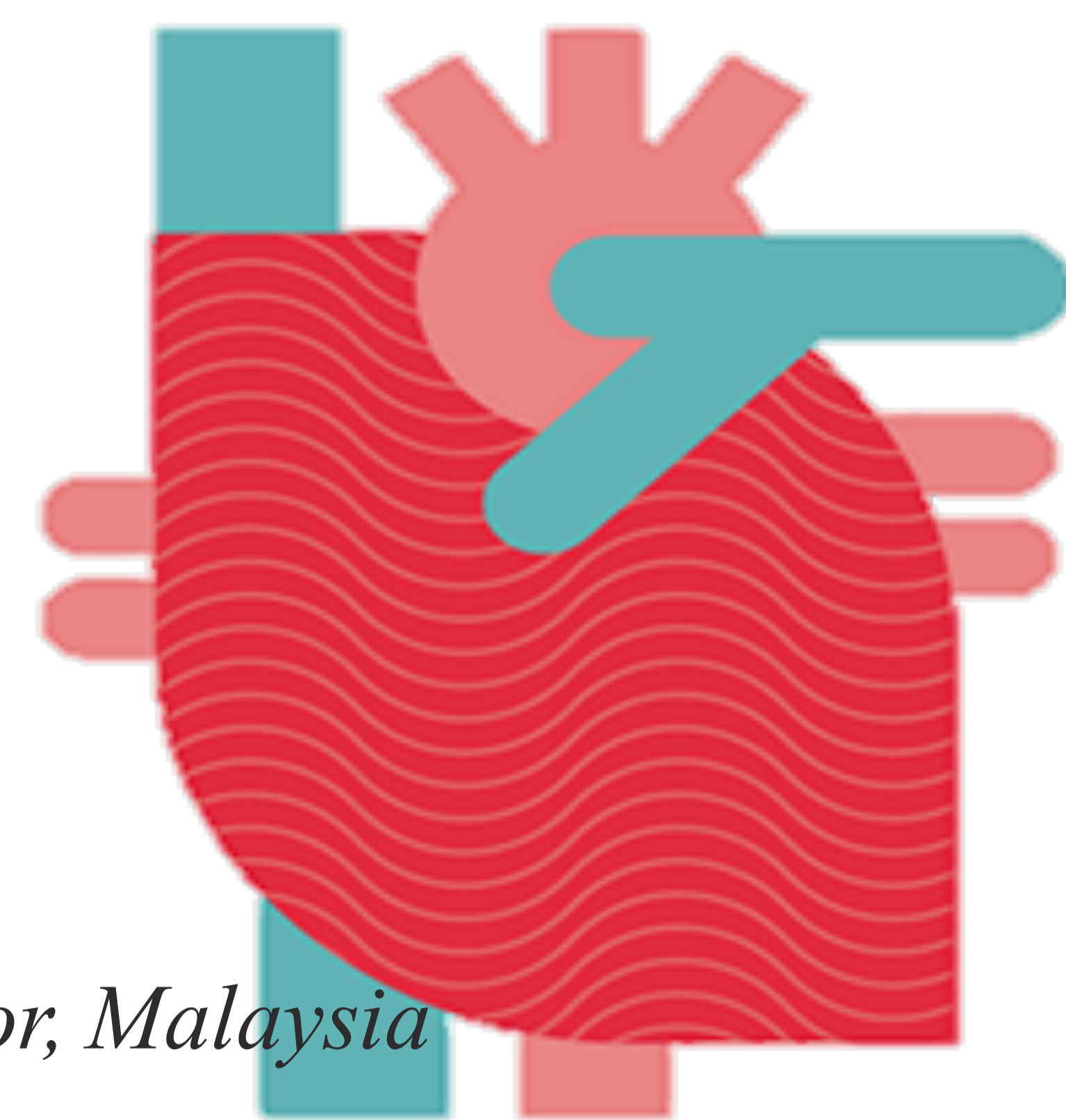


The Hiccapping Heart:

A Foretell Sign For Acute Coronary Syndrome

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Introduction:

Hiccup, is a trivial and self-limiting condition but can progress to persistent or intractable hiccups with serious underlying etiologies including acute coronary syndrome (ACS). We would like to highlight a patient with ACS where hiccup was the only complaint.

Case report:

A 59-year-old gentleman with hypertension presented with persistent hiccups for 2 days.

He denied any chest pain, shortness of breath or giddiness. His physical examination was unremarkable, vital signs were stable. He received symptomatic treatment but the hiccups persisted.

Common causes for persistent hiccups had been rule out. An electrocardiogram (ECG) was ordered unintentionally showing sinus rhythm with significant ST-depressions over leads I, aVL, V2-V6 (*Figure 1*). Because of that, Troponin I was sent and was elevated. Further history, it was exertion-induced hiccups. He was treated for non ST-elevation myocardial infarction and treatment was initiated and his hiccups gradually resolved. He was discharged after 3 days with resolution of ECG changes (*Figure 2*) and cardiac enzymes.

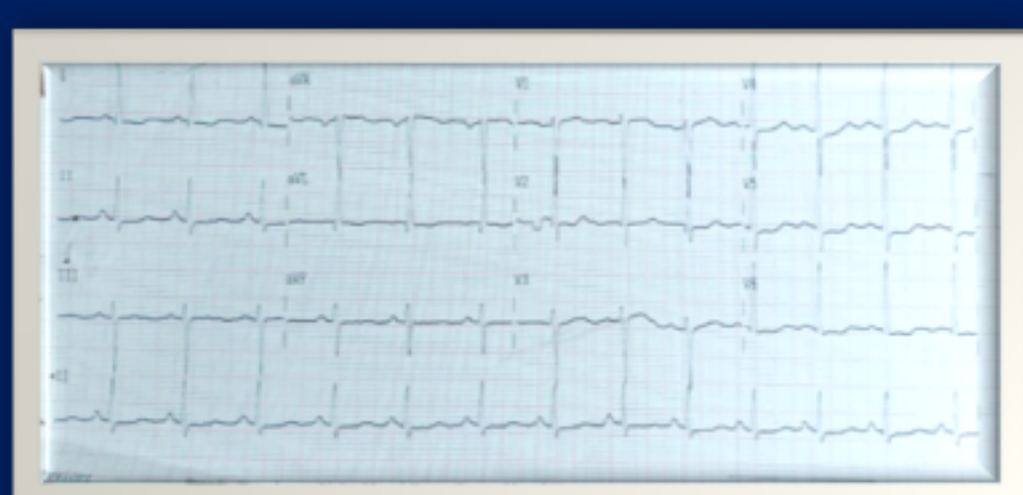


Figure 1: ECG on arrival

Figure 2: ECG at discharge

Discussion:

There are various causes of persistent hiccups, e.g. metabolic abnormalities, malignancy and central nervous system pathology but rarely attributed to cardiac disease. Cardiovascular hiccups was first described in 1993 by Launois et al, and to date only 25 articles were found related to it.¹

Our patient's sole complaint was persistent hiccups aggravated by exertion and was found to have significant ST segment changes in ECG with raised cardiac enzymes. They resolved upon initiation of etiological treatment suggests the correlation.

Hiccup is an involuntary contraction of the diaphragm accompanied by closure of the glottis. Usually it is self limiting, but if episodes last >48 hours, it is defined as persistent hiccups; intractable hiccups if > 1 month.¹ Hiccup reflex arc has afferent, central and efferent components. The afferent is composed of vagus, phrenic and sympathetic nerves; the efferent is composed of phrenic nerve.

The exact mechanism of cardiovascular hiccups is unsure but it maybe due to irritation of the phrenic nerve, which its motor fibers supply the diaphragm, and its sensory fibers to the pleura and pericardium. The other cause could be irritation of the vagus nerve which supplies the pericardium.²

Etiological treatment is effective in cardiovascular hiccups. Our patient's hiccups gradually resolved after standard medical therapy for ACS.

Conclusion:

Cardiovascular hiccups is rare, but when elderly patients with multiple risk factors for ACS present with persistent hiccups, it should ignite any treating physician to consider cardiac disease attribution.

References:

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2. Shaikh, Nasreen & Raj, Rishi & Movva, Srinivas & Mattina, Charles. (2018). Persistent Hiccups as the Only Presenting Symptom of ST Elevation Myocardial Infarction. Case Reports in Cardiology. 2018. 1-4.