

## CASE REPORTS

# Prinzmetal Angina with Pan Hypopituitarism- A Case Report

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### Abstract:

*A 31yrs old female teacher came to our emergency department with the complaints of severe retro sternal & compressive type chest pain radiated to the left arm, back and jaw. Pain was partially relieved by rest and associated with vomiting & nausea but no breathlessness. She also reported episodes of angina in previous couple of months. On admission, there was ST-segment elevation that last for few minutes and later progressively resolved. But troponin level was high. Patient was undergone Coronary angiogram and was diagnosed as stress induced cardiomyopathy (SICM), as Coronary Angiogram showed normal epicardialcoronary arteries. Serial ECG was carried out which showed resolved ST elevation. Holter monitoring showed severe ST-segment changes during an angina episode. She had no history of substance abuse or recreational drug use. Before discharge we started oral calcium antagonist and there wasn't any further episode of angina or ST changes on follow up after two months.*

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### Introduction:

Prinzmetal or vasospastic angina is a form of angina that caused by coronary artery spasm, which occurs usually due to a sudden occlusive vasospasm of epicardialcoronary arteries, resulting in a dramatic reduction of coronary blood flow. This kind of transmural myocardial ischemia typically manifested by ST segment elevation on the electrocardiogram (ECG). Prinzmetal's variant angina usually occurs at rest, but in some cases, spasm can also be triggered by efforts or stress conditions.<sup>1</sup>

Asprinzmetal variant angina is indicated by angina due to coronary artery vasospasm, further workup with diagnostic coronary angiography may reveal coronary arteries with or without atherosclerotic narrowings.<sup>2</sup> The underlying physiopathology of this syndrome is unclear.<sup>3-6</sup>

Hypopituitarism is a disorder of diverse etiology that results in partial or total loss of pituitary hormones. It can be presented with various clinical features.<sup>7</sup>

### Case Report:

A 31yrs old, high school teacher hailing from Tongi, Dhaka with the complaints of chest pain for 5 days which is retro sternal, compressive radiated to the left arm, back

and jaw and partially relieved by rest and associated vomiting and nausea but no breathlessness. In the emergency department, her pulse 76 b/min BP- 100/60 mmHg, Lung bases clear, SPO<sub>2</sub> 96%, an ECG was carried out which confirmed acute STEMI (fig1), Cardiac markers HS Troponin I: 32 (19/4) à 12,380 (20/4) à >25,000 (22/4) CK-MB: 224 (20/4) à 57 (22/4), Coagulation screen, lipid profile, U&Es and LFTs unremarkable. COVID-19 rapid antigen and RT-PCR tests were negative. The patient was then stabilized with loading doses and initial plan was to conduct emergency PCI however this was since postponed as ST elevation partially resolved on ECG with resolution of chest pain.

Thereafter patient was admitted to CCU and monitored closely, Bedside ECHO: no regional wall motion abnormality, good LV systolic function. She had H/O of hospital admission with the diagnosis of STEMI 4 months back. She was taking anti-ischemic therapy for the last 4 months. Still she had angina episodes for several times. During our admission, we performed coronary angiogram, which reveals normal epicardial coronary arteries with no evidence of atherosclerotic disease. We started calcium channel blocker (Diltiazem 60mg BD) and there wasn't any episode of angina since then.

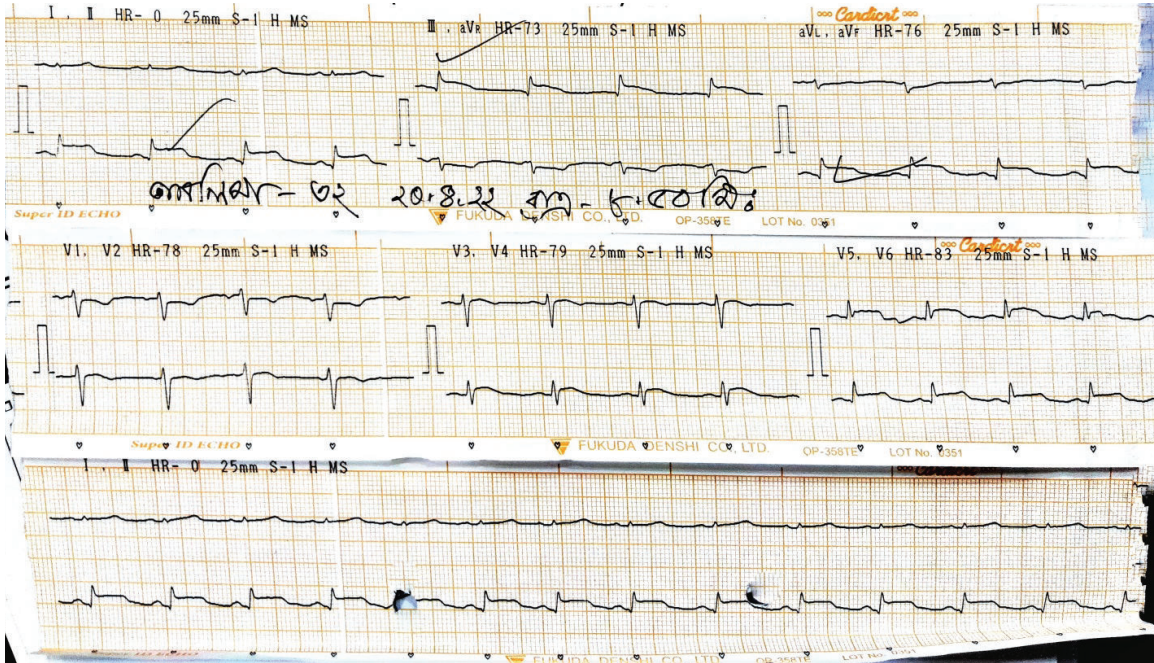


Fig-1: STEMI Inferolateral

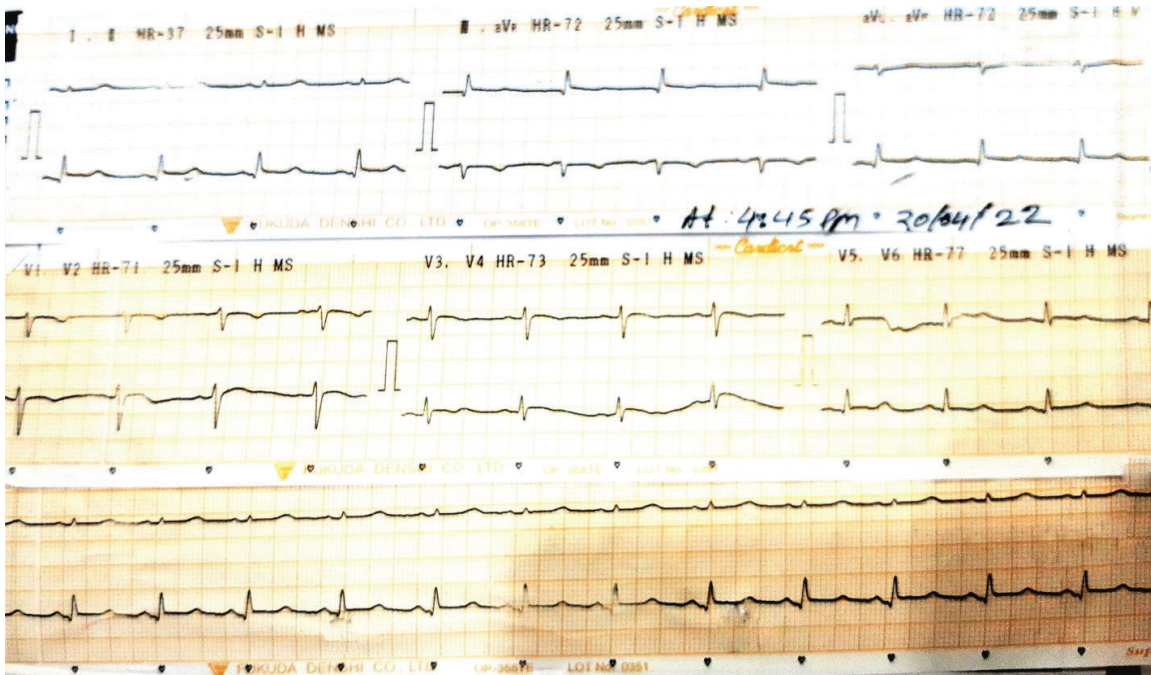
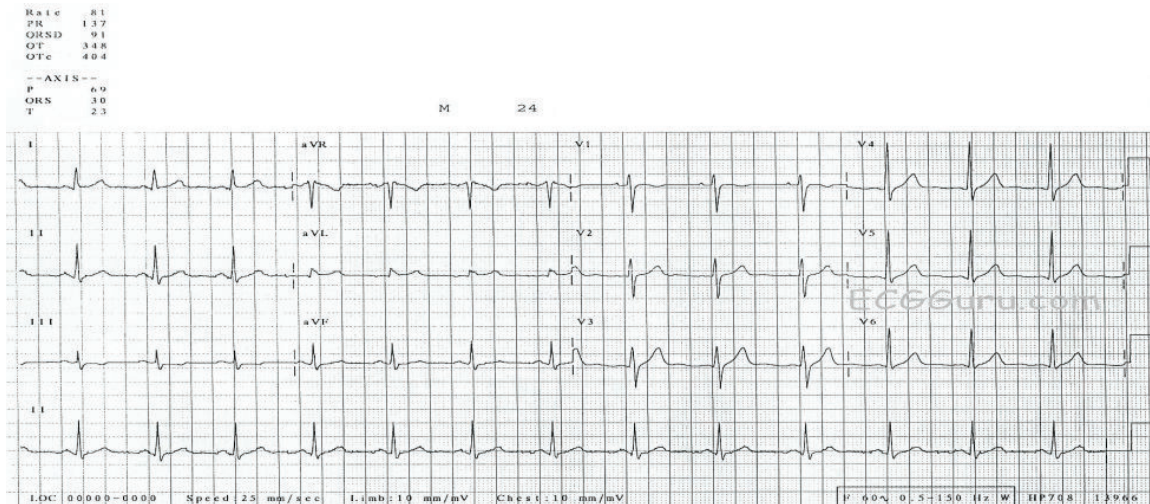


Fig-2: Few hours later in emergency room





**Fig.-3:** After one month

On query to the patient, she also gave H/O of diagnosis of pan hypopituitarism on basis of other medical documents and weakness, fatigue, persistent low mood and anxiety. After an overnight fast, some pituitary hormone tests were performed before: which showed-

Cortisol (4–23 µg/dL): 1.0/3.1 and free thyroxine (0.7–1.9 ng/dL): 0.53; free triiodothyronine (2.3-4.1 pg/mL): 2.8. TSH (0.5-5.0 mIU/L): 8.5. Estradiol hormone level was very low: 5pg/ml. Thyroid autoantibodies were negative. FSH, LH, prolactin levels were normal.

Previous MRI of brain revealed partially empty sella 1 yr back.

For pan hypopituitarism, she was prescribed Hydrocortisone 10 mg daily (oral), levothyroxine 50µg daily (oral), Drospirenone+Ethinylestradiol (oral), but she took medicines irregularly specially tab hydrocortisone. This time index hospitalization 4 days prior admission she forgotten to take Tab Hydrocortisone. After hydrocortisone replacement her physical well-being were improved.

### Discussion:

Prinzmetal angina (vasospastic angina or variant angina) is a known clinical condition characterized by chest discomfort or pain at rest with transient electrocardiographic changes in the ST segment, and with a prompt response to nitrates. These symptoms occur due to abnormal coronary artery spasm. Our patient had two

episodes of angina and she is also suffering from pan hypopituitarism and there may be relation between two these.

After adding calcium channel blocker (Diltiazem) for prinzmatal angina and Hydrocortisone for pan hypopituitarism, patient became symptom free. There was no episode of further angina and no fatigability.

### References:

1. Lanza GA, Crea F. Vasospastic angina. E- Journal of Cardiology Practice. Nov, 2003; 2(9)
2. Maseri A, Pesola A, Marzilli M, et al. Coronary vasospasm in angina pectoris. Lancet 1977;1:713–7.
3. Yamagishi M, Miyatake K, Tamai J, Nakatani S, Koyama J, Nissen SE. Intravascular ultrasound detection of atherosclerosis at the site of focal vasospasm in angiographically normal or minimally narrowed coronary segments. J Am CollCardiol 1994;23:352-7.
4. Higgins CB, Wexler L, Silverman JF, Schroeder JS. Clinical and arteriographic features of Prinzmetal's variant angina: documentation of etiologic factors. Am J Cardiol 1976;37:831-9.
5. Curry RC Jr, Pepine CJ, Sabom MB, Conti CR. Similarities of ergonovine-induced and spontaneous attacks of variant angina. Circulation 1979;59:307-12.
6. Yasue H, Nakagawa H, Itoh T, Harada E, Mizuno Y. Coronary artery spasm—clinical features, diagnosis, pathogenesis, and treatment. J Cardiol 2008;51:2-17.
7. Toogood A & Paul S. (2008). Hypopituitarism: Clinical Features, Diagnosis, and Management. Endocrinology and metabolism clinics of North America. 37. 235-61, x. 10.1016/j.ecl.2007.10.004.