

Visited gynaecology; ended up in cardiology: a case of misoprostol-induced coronary vasospasm

Abdullah Rana^{1*}, Iqy Haziq Mohamad¹

1. Our Lady of Lourdes Hospital, Drogheda, Ireland

Correspondence to: Abdullah Rana

*Our Lady of Lourdes Hospital, Drogheda, Ireland.

Email: abdullahbinrauf@hotmail.com

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Background: Misoprostol is a prostaglandin E1 analogue commonly used in obstetric and gynaecological practice and is generally regarded as safe. Coronary artery vasospasm is a recognised but uncommon cause of acute chest pain and transient ischaemic electrocardiographic changes, and may be precipitated by certain medications. Drug-induced coronary vasospasm can mimic acute coronary syndrome despite the absence of obstructive coronary artery disease [1].

Case Presentation: A 53-year-old woman with a history of hypertension, hypercholesterolaemia, and a strong family history of cardiovascular disease attended a gynaecology clinic for management of menorrhagia. She received 400 micrograms of misoprostol. Within 15 minutes, she developed sudden-onset severe central chest pain radiating to both arms and her back, associated with shortness of breath. She was transferred urgently to the emergency department. On arrival, she was haemodynamically stable with normal vital signs. Physical examination was unremarkable. An initial electrocardiogram demonstrated sinus rhythm with approximately 1 mm ST-segment elevation in leads III and aVF. Given the clinical presentation and ECG findings, she was managed according to acute coronary syndrome protocols. Serial electrocardiograms demonstrated resolution of the ST-segment changes, and cardiac biomarkers were not significantly elevated. Coronary angiography was performed and demonstrated unobstructed coronary arteries with no evidence of atherosclerotic disease. Given the close temporal relationship between misoprostol administration and symptom onset, absence of coronary obstruction, and spontaneous resolution of symptoms, a diagnosis of misoprostol-induced coronary artery vasospasm was made. She was admitted under cardiology care for monitoring and supportive management and was discharged on day three without complications.

Discussion: Coronary artery vasospasm results from transient coronary constriction leading to myocardial ischaemia and ECG changes that may resemble acute myocardial infarction. Prostaglandin analogues, including misoprostol, have been implicated in rare cases of coronary vasospasm [2]. Recognition of this entity in the emergency department is essential, as failure to do so may result in unnecessary invasive procedures or inappropriate long-term antithrombotic therapy. A detailed medication history and awareness of temporal associations are critical in establishing the diagnosis [3].

Conclusion: Misoprostol-induced coronary artery vasospasm is a rare but important differential diagnosis in patients presenting with acute chest pain and ischaemic ECG changes shortly after drug administration. Heightened awareness among emergency physicians can facilitate prompt diagnosis and appropriate management while avoiding unnecessary interventions.

Keywords: Vasospasm, coronary vasospasm, cardiology, gynecology, side-effects, misoprostol, adverse features.

References

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