

Introduction

The de Winter and Wellens ECG patterns are both highly suggestive of a critical stenosis of the left anterior descending coronary artery (LAD) triggering the need for urgent reperfusion strategies. It is uncommon to witness both ECG patterns co-existing in one patient.

Case Description

A 58-year-old gentleman was referred to our centre for acute coronary syndrome with ECG features consistent with a de Winter pattern (Figure Ⓐ). He reported typical anginal symptoms lasting approximately one hour. On arrival, he was hemodynamically stable with unremarkable clinical findings and no signs of heart failure. Patient was reassessed during resolution of pain at our center and a repeated ECG revealed a Wellens Type B pattern (Figure Ⓑ). Bedside echo showed a preserved ejection fraction but revealed septal and anterior wall hypokinesia. Initial troponin levels were not elevated. Coronary angiography confirmed severe triple vessel disease, with a critically stenosed—but not completely occluded—LAD identified as the culprit lesion. He underwent successful percutaneous coronary intervention and was discharged well with plans for an elective coronary artery bypass graft.



Figure Ⓐ de Winter Pattern

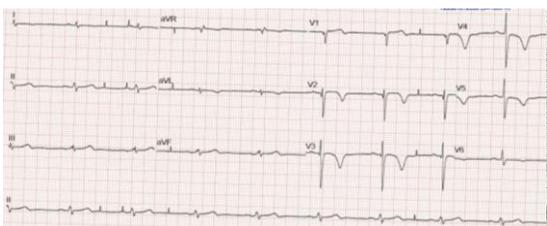


Figure Ⓑ Wellens Type B pattern

Discussion

The de Winter ECG pattern is an anterior STEMI equivalent which is absent of typical ST elevation. Meanwhile, the Wellens pattern is a marker of impending anterior wall myocardial infarction. The de Winter pattern can progress to an anterior STEMI within 90 minutes of symptom onset, reflecting an acutely occluded LAD. In this case, the evolution from a de Winter to a Wellens pattern suggests spontaneous recanalization of the LAD. This rare ECG evolution reflects a dynamic process—shifting from near-complete occlusion to partial or transient restoration of flow in the LAD—likely due to an unstable thrombus.

Conclusion

Both de Winter and Wellens patterns are indicative of LAD ischemia. Early recognition and prompt intervention can prevent further myocardial injury. Awareness of their co-existence and dynamic evolution may enhance diagnostic accuracy and guide timely reperfusion strategies in the emergency setting.

References

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2. Zhu Y, Luo S, Huang B. Evolution of de Winter Into Wellens on Electrocardiogram—What Happened? *JAMA Intern Med.* 2021;181(12):1647–1649.

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