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### WELLENS SYNDROME

I always love getting my copy of *CJRM* in my mailbox, and one of my favourite features is the Country Cardiograms. However, to my surprise, I disagree with the conclusions drawn by the author in the Spring 2015 issue.<sup>1</sup>

Charles Helm suggests that, because the patient with acute chest pain has evidence of an intermittent left bundle branch block (LBBB) (on the first electrocardiogram [ECG]) and evidence of ischemia without ST elevation (on the second ECG), he is not having an ST elevation myocardial infarction (STEMI) and should not be given thrombolytics. In fact, I believe the second ECG shows Wellens syndrome, as defined by the marked T wave inversion across the precordial leads. ST segment depression or elevation is not necessarily a component of this syndrome. Wellens syndrome is known to be associated with high-grade stenosis of the left anterior descending artery and has a very high death rate, with STEMI developing within days in 75% of patients, even with optimum medical management (i.e., those excluding percutaneous coronary interventional therapies). The treatment for Wellens syndrome is invasive therapy with angioplasty, as it is known that med-

ically managed patients have much poorer outcomes.<sup>2</sup>

If I were caring for this patient with active chest pain in a rural community that was without timely access to emergent cardiac catheterization, I would certainly consider thrombolysis while the patient awaited transfer to an interventional site. At the very least I would review the patient and the ECG with my friendly cardiologist.

I think this is a very interesting set of ECGs, and I thank Dr. Helm for his ongoing efforts to produce this excellent feature.

**Tandi Wilkinson, MD,  
CCFP(EM)**

### REFERENCES

1. Helm C. Country cardiograms case 53. *Can J Rural Med* 2015;20:63-4, 71.
2. Mattu A, Tabas J, Barish R, editors. *Electrocardiography in emergency medicine*. American College of Emergency Physicians; 2007. p. 77.

### THE AUTHOR RESPONDS

Thank you for your welcome and thought-provoking query. The teaching points in this Country Cardiograms article were as follows: that LBBB is sometimes intermittent (which allows us potentially to avoid unnecessary thrombolysis); and that this particular set of ECGs allows for

a good understanding of how ischemic changes may manifest in a patient with LBBB. In this case, the second ECG allows us to see how ischemic changes contributed to the atypical left bundle branch pattern in the initial ECG.

The conclusion was that STEMI was not present and that thrombolysis was not indicated. Further management beyond the above-mentioned teaching points was not discussed.

Dr. Wilkinson questions Wellens syndrome (which is a clinical syndrome and not purely an ECG diagnosis). This is conceivable, although the ECG in Wellens syndrome typically refers to a patient who is not experiencing chest pain at the time. I do not believe that in this case one could consider the brief clinical picture presented, along with the ECGs, and conclude that this represents Wellens syndrome, other than to include it in a differential diagnosis.

Discussion with a cardiologist would certainly be useful, and this patient may well require urgent referral and intervention. However, I am not aware of evidence that thrombolysis for an ischemic presentation without ST elevation (in the absence of LBBB) would be indicated.

**Charles Helm, MD, CCFP**