

Title : Separating Inverted U wave syndrome described by Dr. Gerson from Wellen's syndrome is meaning less as both describing exactly the same condition

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With great interest, I read the paper about challenges in Electrocardiography entitled “Inverted U Waves—Red Flags in Electrocardiogram” by Shu et al. (1) Initially, the authors correctly described Wellen's syndrome (2) that was seen in their patient's first EKG consistent with proximal LAD disease. However, they described the second EKG as an Inverted U wave syndrome with reference to Dr. Gerson who described first time this condition. Unfortunately, the authors did not review EKGs that were published under inverted U waves in the literature including original Dr. Gerson's papers. By reviewing published EKGs under inverted U wave including the referenced Dr. Gerson publication, it can clearly be seen that the so-called inverted U wave is actually a terminally inverted T wave similar to Wellen's description of Wellen's EKG as inverted U wave. (3,4) Figures below are showing the original EKG illustration described by Dr. Gerson as inverted U wave syndrome. The first EKG is from the paper describing an inverted U wave after exercise and the second EKG is from the subsequent paper describing an inverted U wave at rest as a warning sign for proximal LAD lesions:

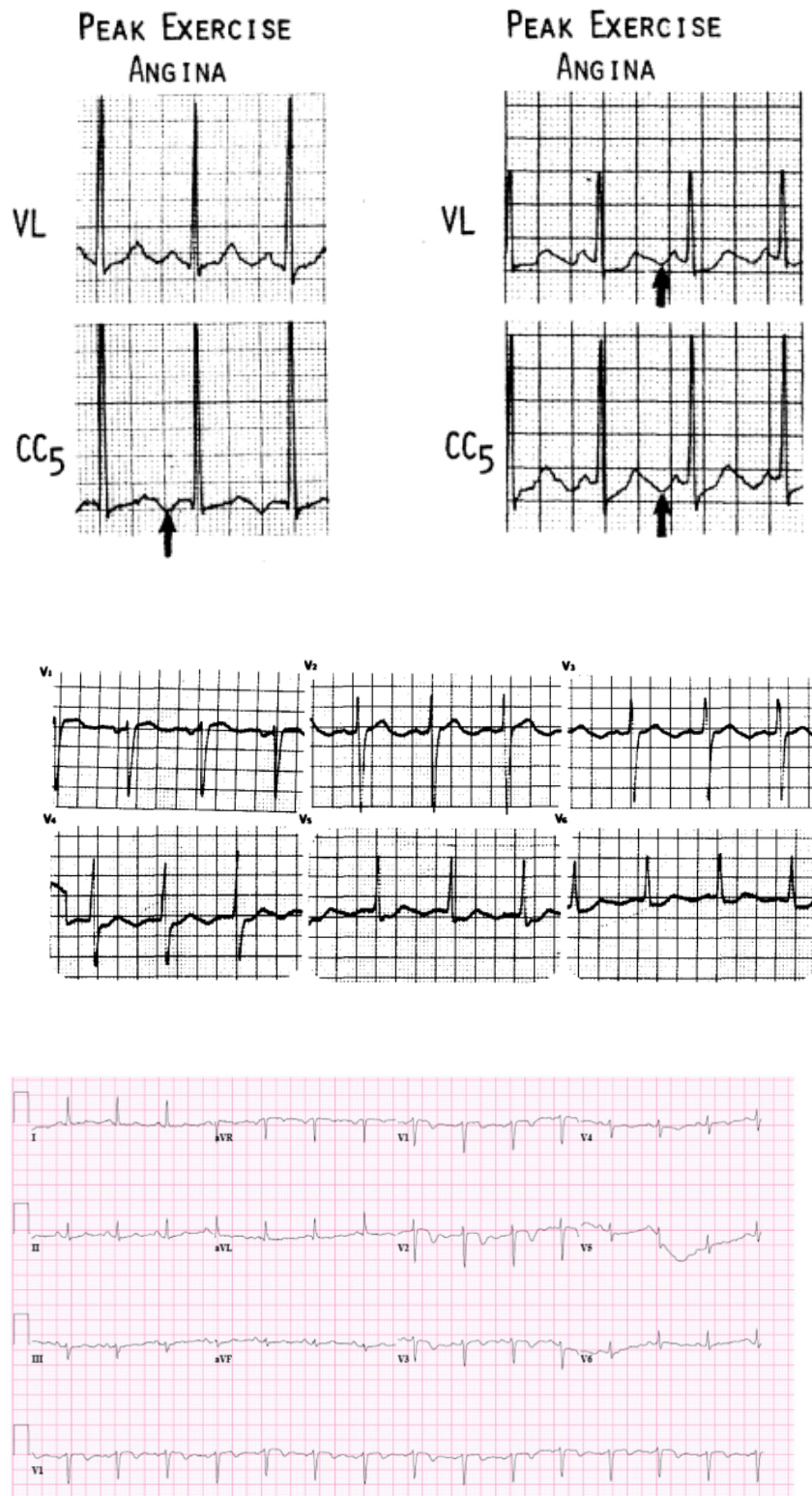


Fig. 1 Inverted T waves in V1 to V4 and inverted U waves in V2 and V3.

As it can clearly be seen, they described the terminally inverted T wave (exactly the same description by Wellen et al.) as inverted U wave syndrome. This fact that unfortunately the same syndrome is described as two separate conditions is extensively discussed by Movahed (5,6) but the authors failed to reference these papers. Another EKG published as an inverted U wave by Savori et al. et al (7) describing inverted U wave syndrome is exactly the same as Wellen's EKG:

Dr. Gerson's group should get the initial credit for describing and publishing this phenomenon before Dr. Wellen. However, not mentioning Dr. Gerson in their publications, it created confusion in describing this EKG pattern in the medical community. Since original descriptions of this EKG abnormality by Dr. Gerson and Wellen, this pattern has been confirmed and recognized numerous times by many clinicians but only described by some authors as Wellens' syndrome (8-11) while others only mentioned it as inverted U waves (12-14) but never both until we published about this fact and this confusion (5,6).

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