

High degree right bundle branch block with left anterior hemiblock and lateral fibrosis resembling an atypical left bundle branch block in the limb leads

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The interesting ECG tracing reported by Kukla et al. [1], shows atrial fibrillation whose f waves disturb a clear identification of the initial QRS forces, particularly in lead I.

A high degree right bundle branch block (RBBB) is easily recognised in the precordial leads which have a peculiar feature: the precordial transition is strongly displaced to the left, suggesting a severe right ventricular enlargement. This RBBB is associated with a high degree left anterior hemiblock with profound 'S3' wave that may denote a left ventricular enlargement. The wide 'q1' wave and the slowly ascending 'r2' and 'r3' waves indicate a lateral fibrosis. Consequently, the lead I pattern is not of a 'typical' left bundle branch block (LBBB) but it resembles a LBBB with myocardial fibrosis. It is important to note that there is no

slurred S wave in lead I and the pattern is of a genuine standard masquerading RBBB as defined by Rosenbaum et al. [2]. In fact, there is a negligible small late 'r' wave in aVR.

It is apparent that the strong late electrical forces generated by the right ventricular depolarisation are counterbalanced by those caused by the delayed activation of the antero-superior wall of the left ventricle. Therefore, in the frontal plane, the final QRS forces are directed to approximately -90 degrees, a fact explaining the absence of the characteristic slurred S wave in lead I.

Conflict of interest: none declared

References

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