Bachmann block pattern resulting from inexcitable areas peripheral to the Bachmann’s bundle: controversial name or concept?

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The electrocardiographic (ECG) P-wave pattern, >120 ms, and bimodal (±) in inferior leads has been attributed to Bachmann’s bundle block. We have mapped left atrial (LA) activation in a patient with mild mitral stenosis, displaying this pattern, and with history of recurrent atypical flutter. Failure of multiple antiarrhythmic drugs prompted an electrophysiological study with transseptal access to the LA.

Electroanatomic map during flutter disclosed a large low-voltage area in the posterior–superior LA and macro-reentrant activation around the left superior pulmonary vein (LSPV). Ablation of an isthmus between the LSPV and the low-voltage area interrupted the tachycardia. Electroanatomic map in sinus rhythm displayed a wide ± P-wave, identical to pre-ablation recordings. Left atrial activation started at the superior-septal wall (presumed insertion of Bachmann’s bundle) (Figure), but it was blocked along the LA roof and therefore, high lateral activation was delayed in an ascending pattern from the posteroinferior LA wall, explaining the pattern.

Bachmann block pattern can be caused by non-excitable low-voltage areas peripheral to the insertion of Bachmann’s bundle in the high septal LA. This concept would fit well with the frequent association of the ± P-wave pattern with LA macro-reentrant tachycardia.

The full-length version of this report can be viewed at: http://www.escardio.org/communities/EHRA/publications/ep-case-reports/Documents/Bachmann-block-pattern.pdf

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