Morphologic Features of the P Waves at Surface Electrocardiogram as Surrogate to Mechanical Function of the Left Atrium Following a Successful Modified Maze Procedure

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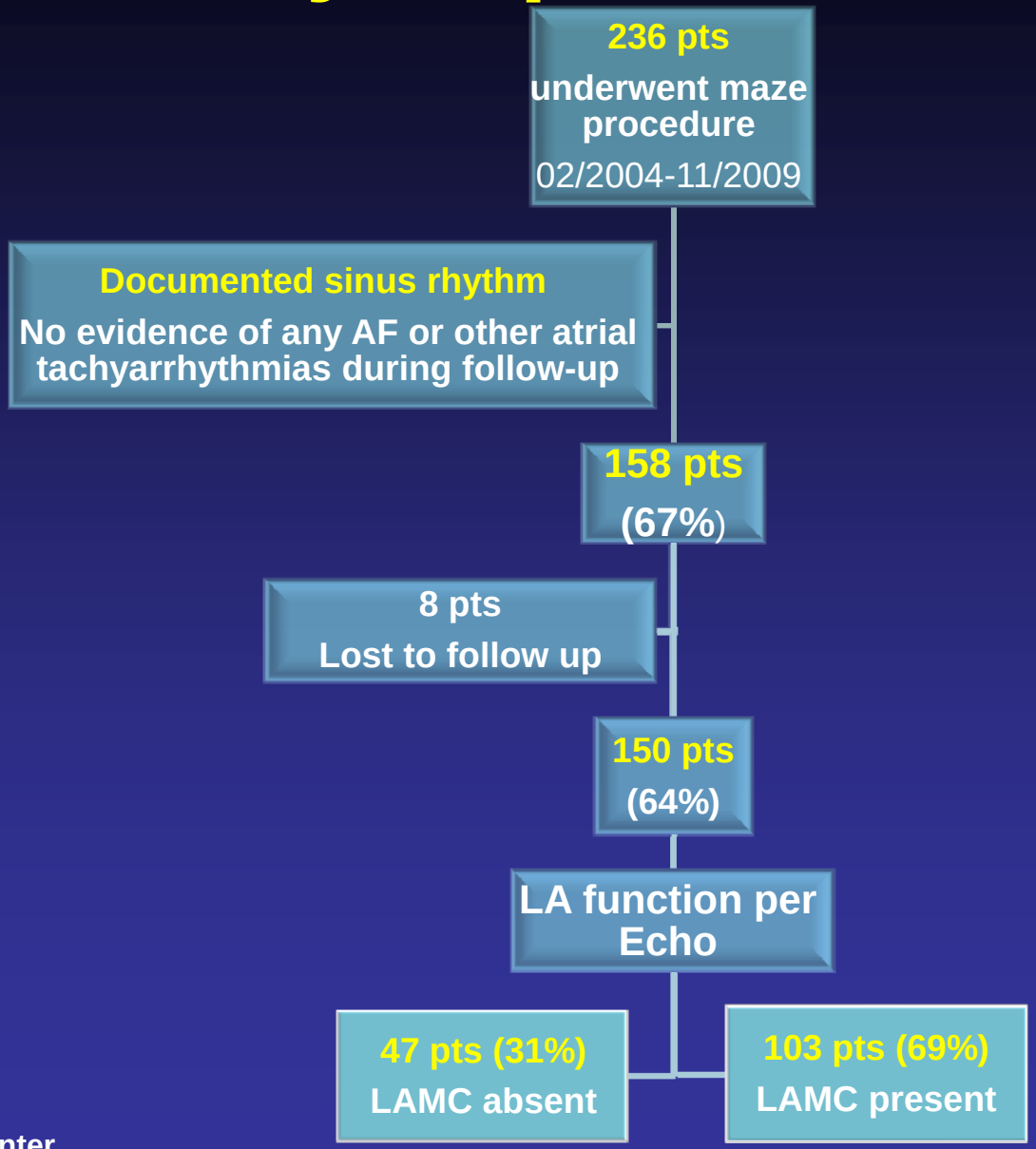
Disclosures

NONE

Aim

- To determine whether lack of Left atrial mechanical contraction (LAMC) following the Maze procedure may be characterized on the surface ECG by certain P wave morphologic features.

Study Population



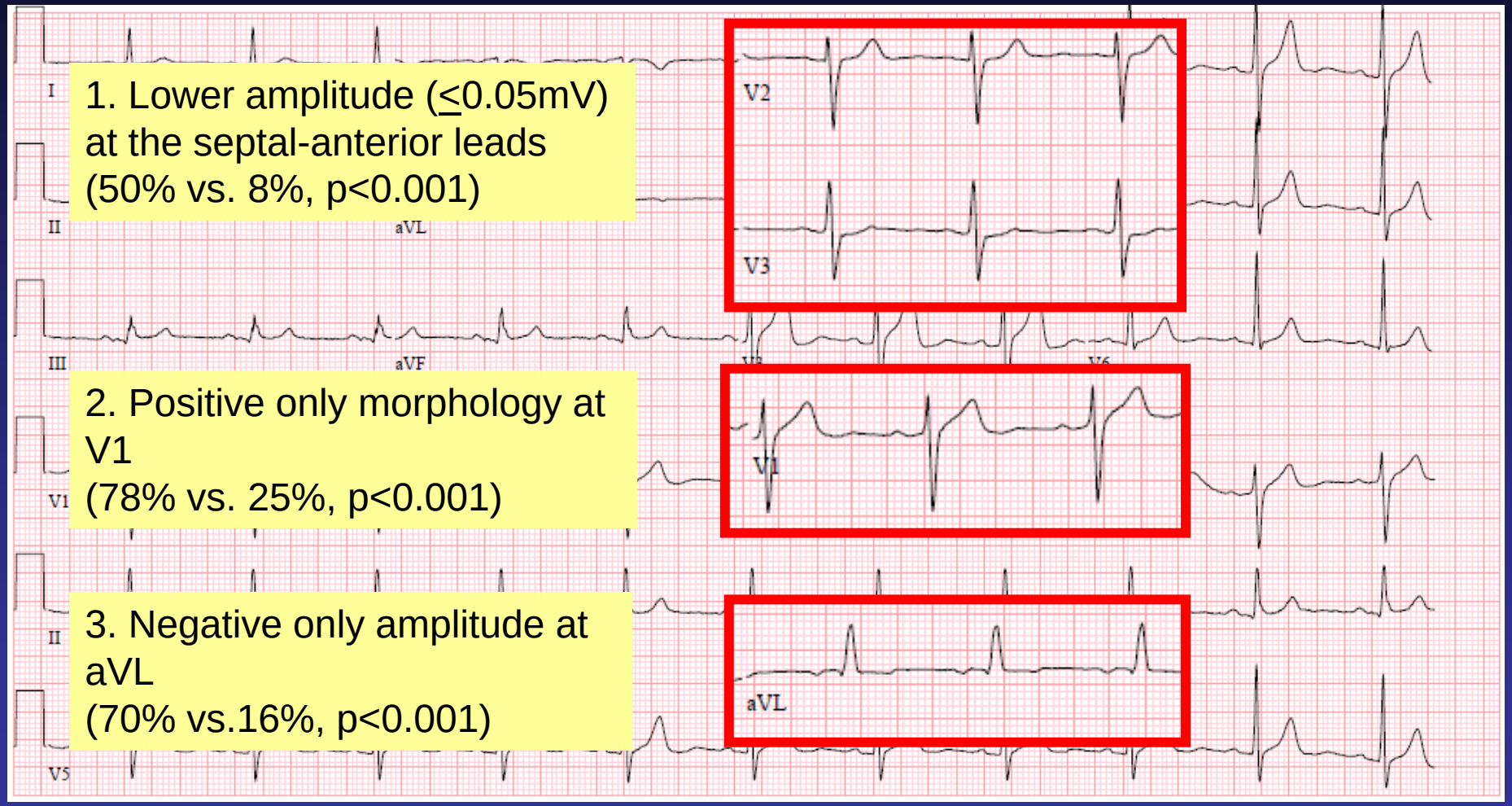
Methods

- **ECG:**
  - P wave amplitude:
    - Septal-anterior region (V1-4)
    - Inferior region (II, III, aVF)
    - Lateral region (I, aVL, V5-6)
  - P wave morphology (positive/negative)
    - V1, aVL, aVR, II, III, AVF
- **ECHO:**
  - LA size and function (+/- of A wave)

Results

- Absent LAMC profile was characterized by three distinctive P wave morphology parameters in a multivariate analysis:

Results


1. Lower amplitude (≤0.05mV) at the septal-anterior leads (50% vs. 8%, p<0.001)
2. Positive only morphology at V1 (78% vs. 25%, p<0.001)
3. Negative only amplitude at aVL (70% vs.16%, p<0.001)
I
II
III
V1
II
V5
aVL
aVF
V2
V3
V1
aVL

Conclusion

Absence of LA mechanical contraction following the modified Maze operation may be identified by a distinguished pattern of the P waves on the surface ECG.