

Result of electrophysiological study in patients with undocumented suspected paroxysmal supraventricular tachycardia: the BELIEVE-SVT registry

Ramos Jimenez J.¹; Marco Del Castillo A.¹; Lozano Granero VC.²; Ramos Fernandez P.³; Jimenez Sanchez D.⁴; Gunturiz Beltran C.⁵; Alonso Fernandez P.⁶; Ayala HD.⁷; Dallaglio P.⁸; Salgado R.⁹; Lazaro Rivera C.¹⁰; Rodriguez Manero M.¹¹; Borrego Bernabe L.¹; Arribas Ynsaurriaga F.¹; Rodriguez Munoz DA.¹

¹University Hospital 12 de Octubre, Madrid, Spain

²University Hospital Ramon y Cajal de Madrid, Madrid, Spain

³General University Hospital of Alicante, Alicante, Spain

⁴University Hospital Puerta de Hierro Majadahonda, Madrid, Spain

⁵Hospital general universitario de Castellón, Castellón de la plana, Spain

⁶Hospital de Manises, Valencia, Spain

⁷University Hospital La Fe, Valencia, Spain

⁸University Hospital Bellvitge, Barcelona, Spain

⁹Hospital Clinico San Carlos, Madrid, Spain

¹⁰Hospital Torrejon, Madrid, Spain

¹¹University Hospital A Coruna, A Coruna, Spain

Funding Acknowledgements: Type of funding sources: None.

Introduction: Paroxysmal supraventricular tachycardias (PSVT) are common arrhythmias and catheter ablation is considered its first-line treatment. However, the duration of the episodes frequently precludes ECG documentation. Thus, patients may not be referred for ablation until the tachycardia is documented, leading to recurrences, emergency room visits and often unnecessary tests or treatments. Our objective was to evaluate the results of electrophysiological study (EPS) followed or not by ablation in patients with suspected but not documented PSVT.

Methods: Multicenter, retrospective, observational registry of consecutive patients undergoing EPS due to clinical suspicion of PSVT, but with no prior ECG documentation. Collection of clinical and EPS data, along with data regarding ablation, when performed.

Results: 427 patients of 12 centers were included. Mean age was 46.3 ±16.1 and 297 (69.6%) were females. Most frequent symptoms consisted on sudden onset (n = 360; 84.9%) and abrupt end (n = 304; 72.0%), with median episode duration of 10 minutes (interquartile range 5-20 min).

Sustained arrhythmias were induced in most patients (n = 255; 59.7%). Specific types are summarized in Table 1. Ablation was performed in 274 (64.2%) patients. A total of 10 complications (2.3% of procedures) were reported: 3 transient AV block, 2 PR interval prolongation, 2 puncture-related hematoma, 2 painful site of puncture and 1 catheter entrapment in mitral chordae.

Conclusions

Electrophysiological study in patients with palpitations highly suggestive of PSVT is an effective and safe diagnostic and therapeutic tool that may be considered as a first-choice even in the absence of documented tachycardia.

Results of EP study

Results of electrophysiological study	
Typical AVNRT	183 (42.9%)
Orthodromic AVRT	38 (8.9%)
Dual AV nodal physiology	30 (7.0%)
1 nodal echo beat	21 (4.9%)
Atrial tachycardia	19 (4.5%)
>1 nodal echo beat	17 (4.0%)
Atrial fibrillation	7 (1.6%)
Atypical AVNRT	7 (1.6%)
Atrial flutter	1 (0.2%)
No abnormal findings	104 (24.4%)

AVNRT: atrioventricular nodal reentrant tachycardia **AVRT:** atrioventricular reentrant tachycardia