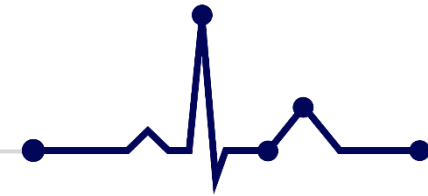


The prevalence of upper common pathway in atrio-ventricular nodal reentry tachycardia : Late atrial premature depolarization



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- Consulting Fees: none
- Other: none



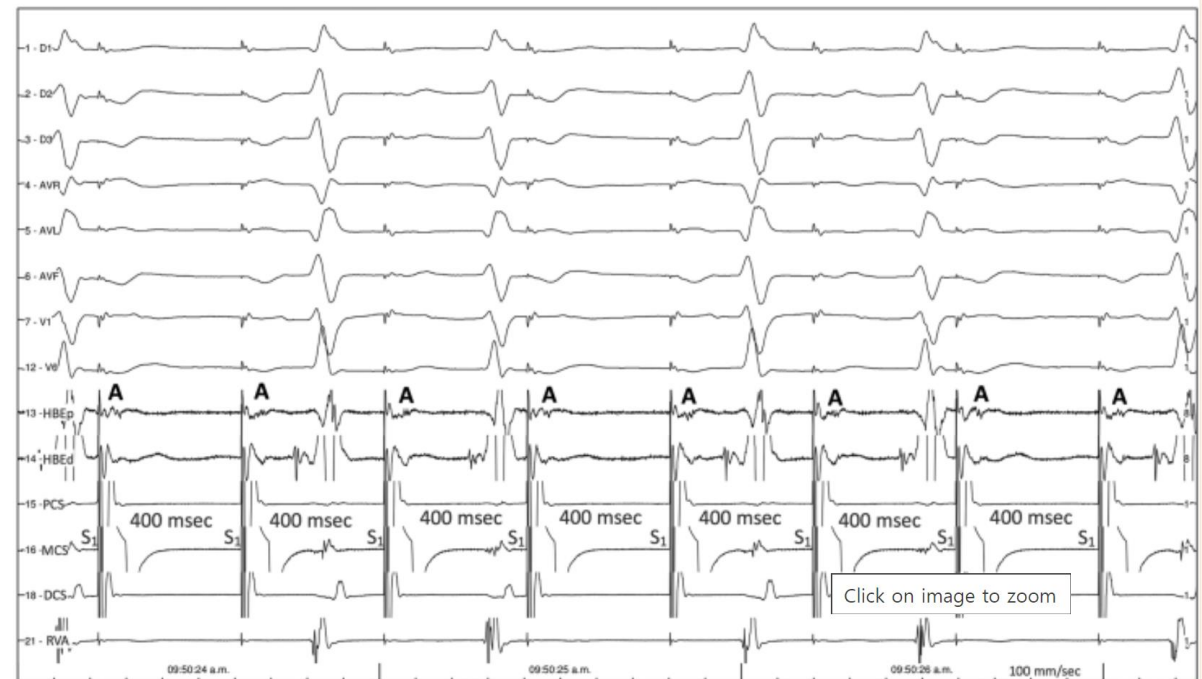
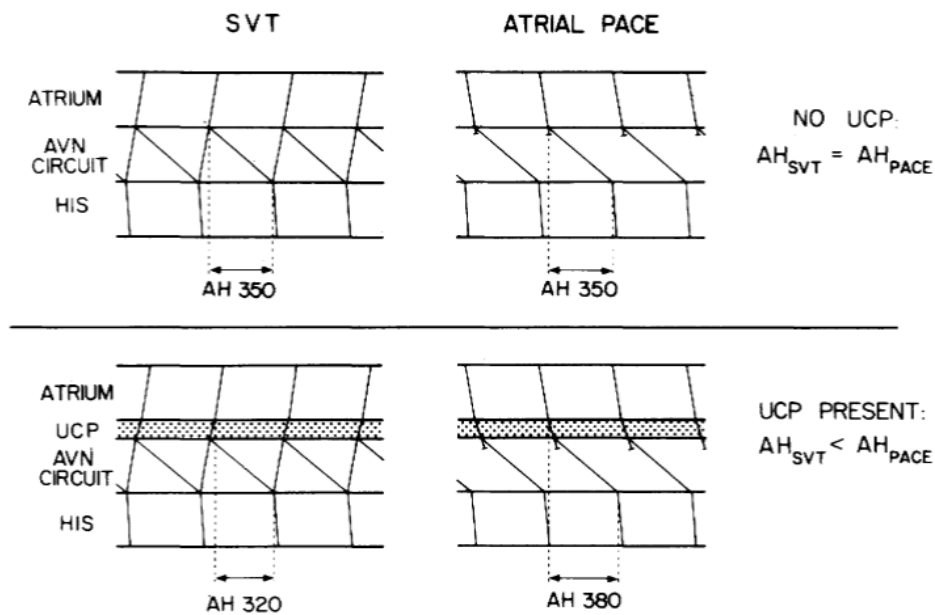
Introduction

- AV nodal tissue connected to atrial and ventricular tissue
 - Upper common pathway (UCP) / Lower common pathway (LCP)
- LCP
 - Distal junction of AVN tissue and the HIS bundle
- UCP ?



Introduction

- AV nodal tissue connected to atrial tissue and ventricular tissue
 - Upper common pathway (UCP) : 28% of UCP prevalence



Miller JM, Rosenthal ME, Vassallo JA, Josephson ME. Atrioventricular nodal reentrant tachycardia: studies on upper and lower 'common pathways'. *Circulation* 1987;75:930-40

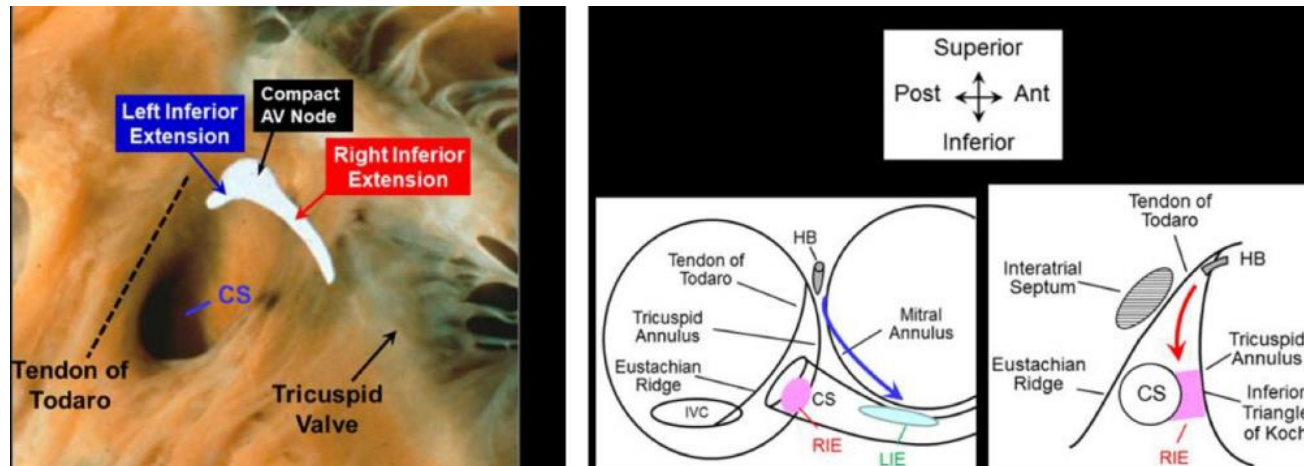
Hadid C, Gonzalez S, Almendral J. Atrioventricular nodal reentrant tachycardia: Evidence of an upper common pathway in some patients. *HeartRhythm Case Rep* 2018;4:227-31

Introduction

- Orthodromic atrial capture during atrial pacing in SVT

(Sato M, Miyajima S, Koyama S, Ishiguro J, Okabe M. Orthodromic capture of the atrial electrogram during transient entrainment of atrioventricular nodal reentrant tachycardia. *Circulation* 1993;88:2329-36.)

- Anatomical evidence of compact AV nodal extension to right (left) inferior direction of RA (slow pathway)

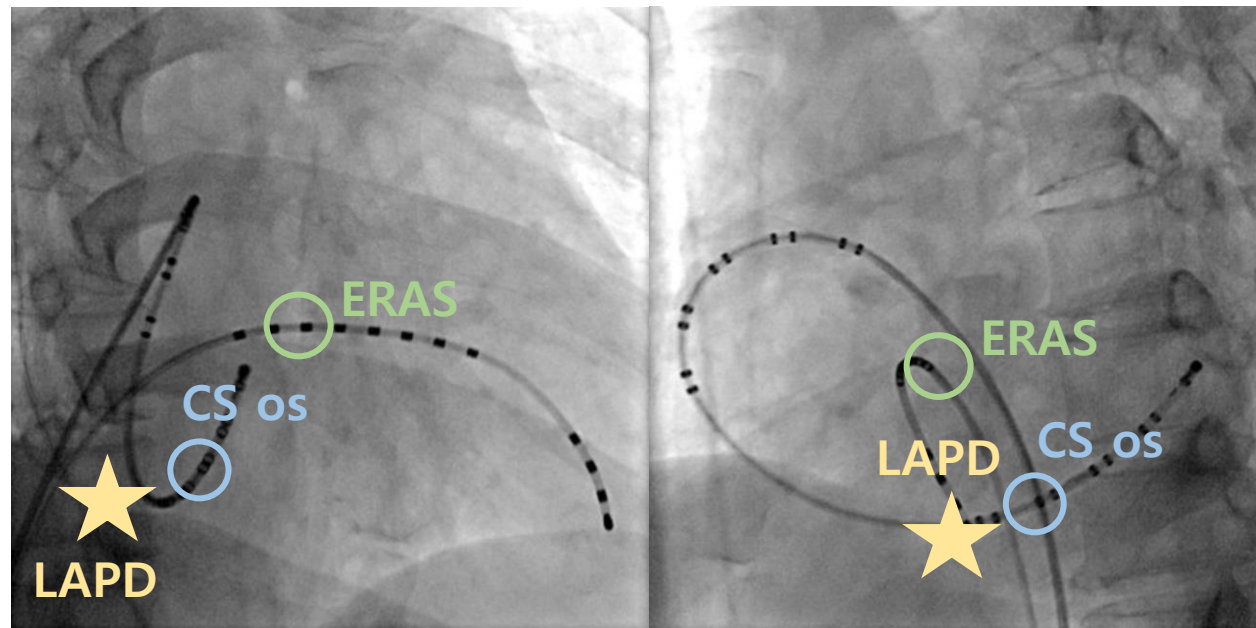


Inoue S, Becker AE. *Circulation*. 1998 Jan 20;97(2):188-93



Methods

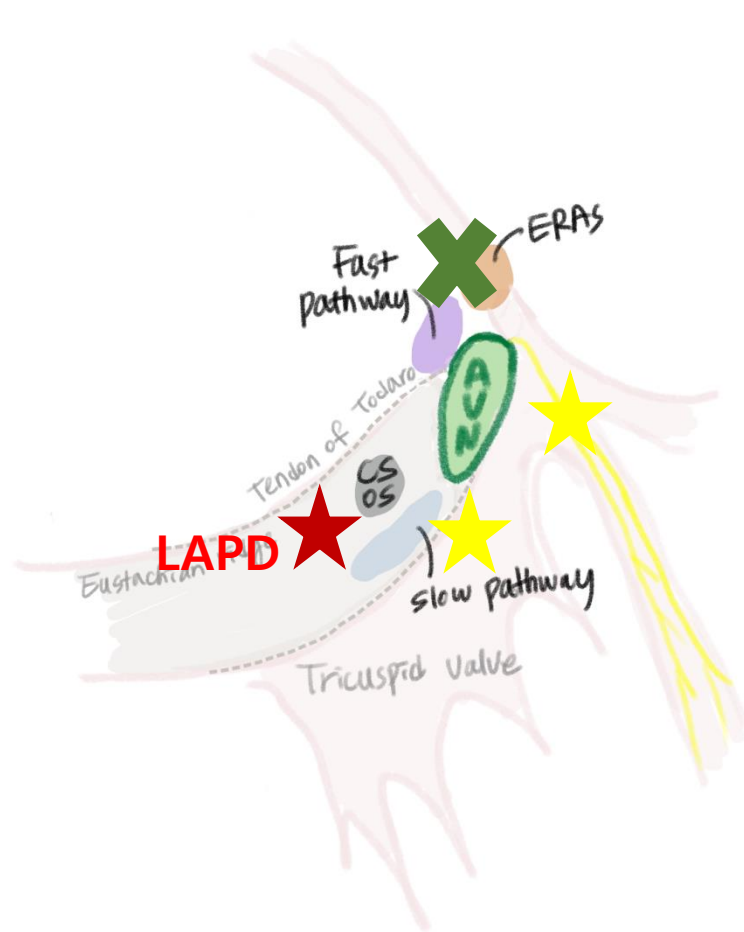
- Single center retrospective study
- AVNRT using a right inferior slow pathway by electrophysiologic studies in the Seoul St. Mary's Hospital from 2019 to 2022
- Late atrial premature depolarization (LAPD★) maneuver.
- Analysis of the earliest atrial activation sequence (ERAS○) and tachycardia cycle length



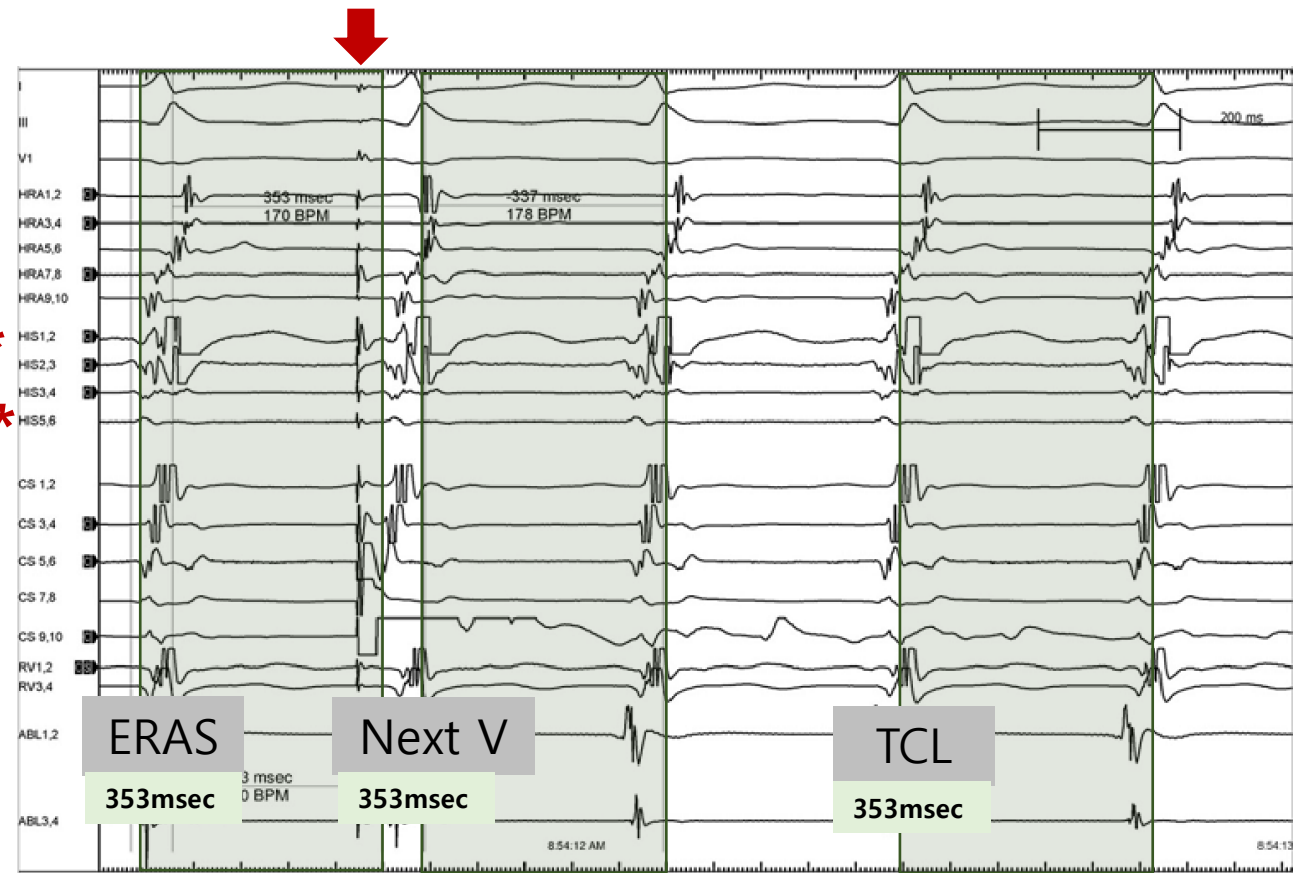
Methods

Absence of UCP

- LAPD can reset the tachycardia without depolarizing the earliest retrograde atrial activation site (ERAS) near the proximal His



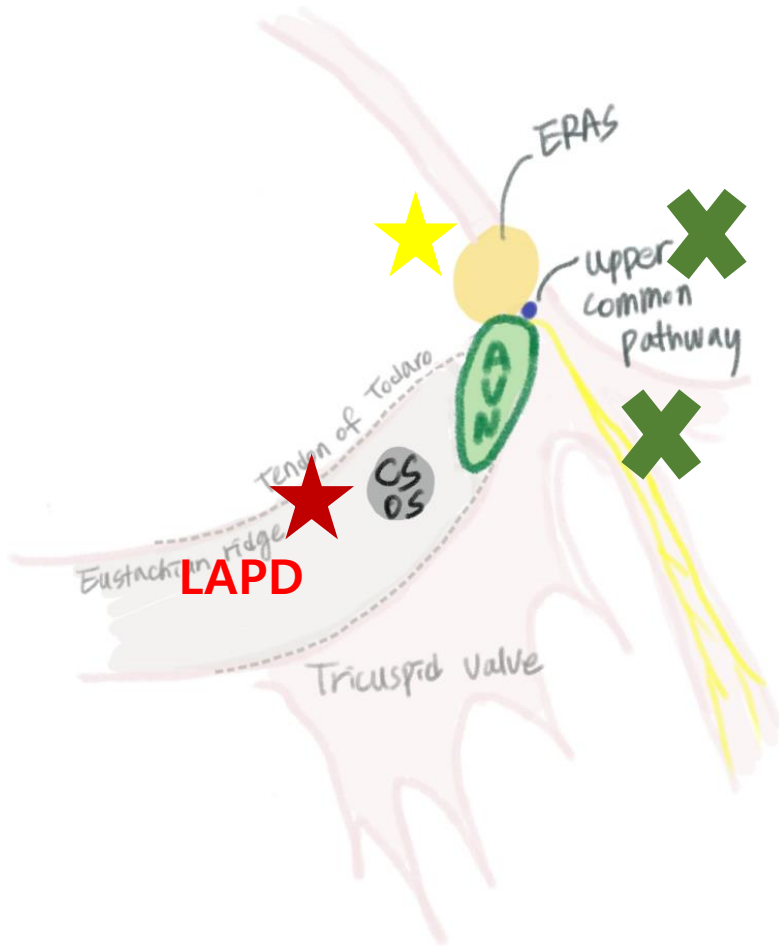
HIS d *
HIS p *



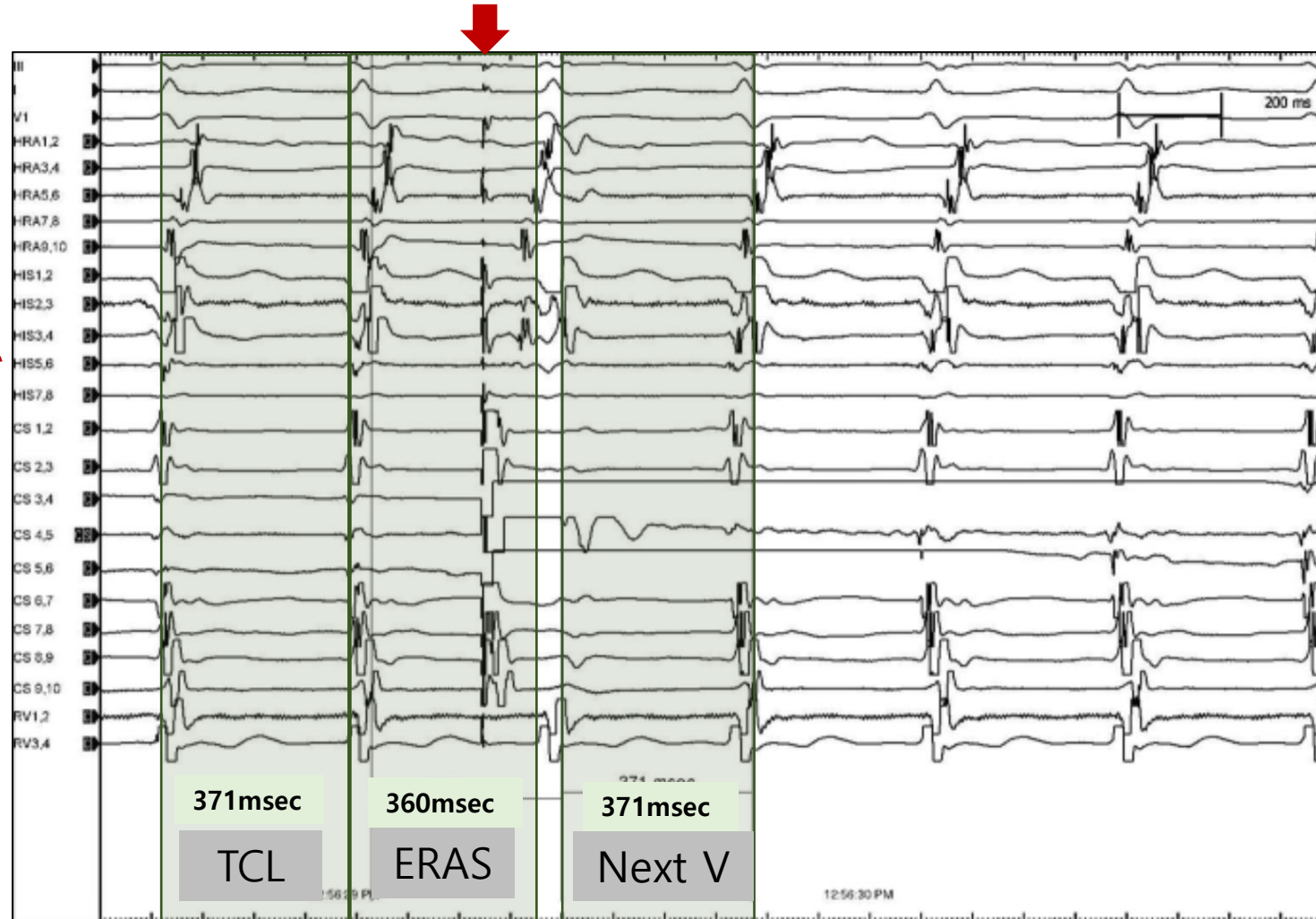
Methods

Presence of UCP

- LAPD can depolarize the ERAS without resetting the tachycardia



HIS d *
HIS p *



Methods

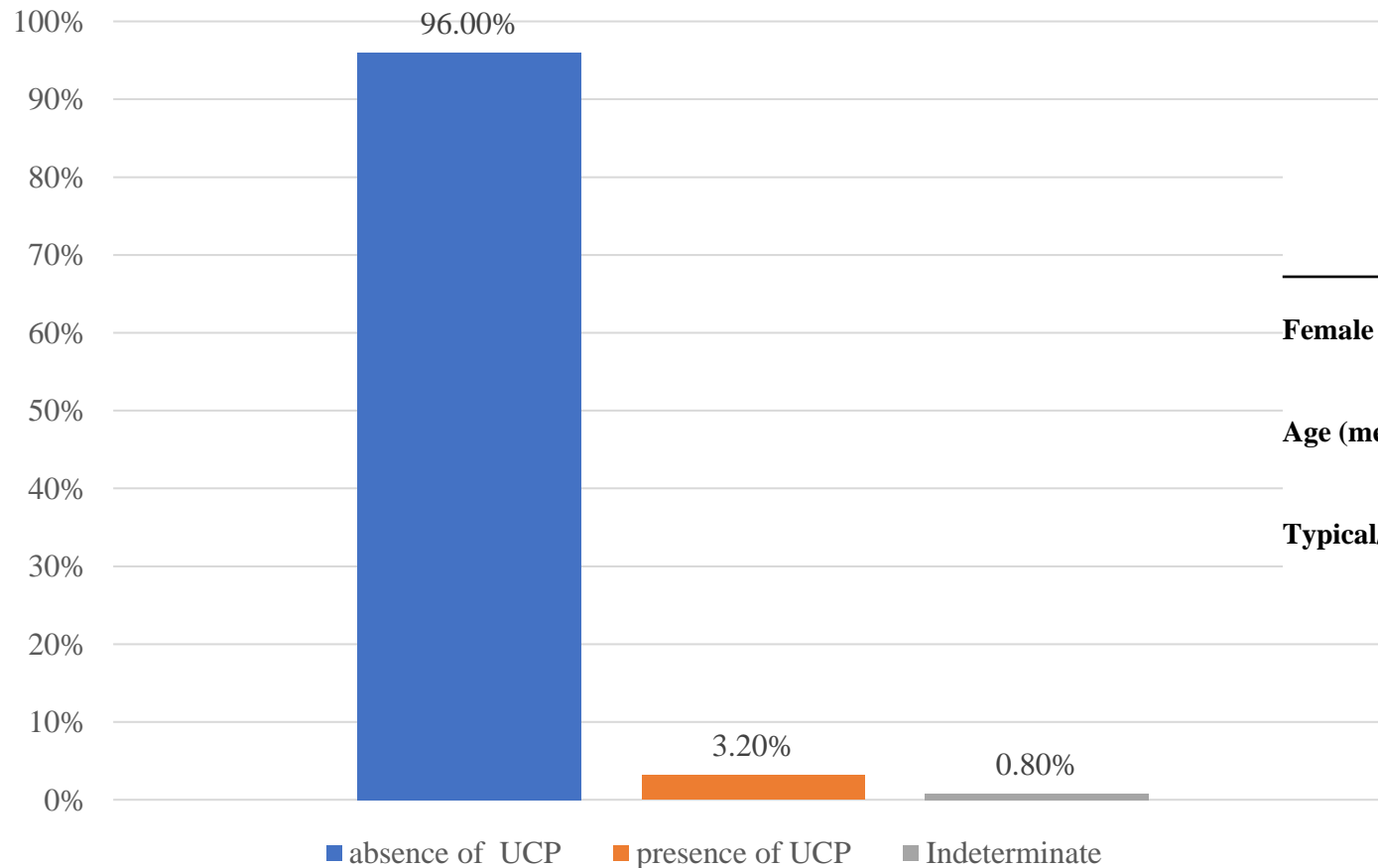
Indeterminate

- Simultaneously advancement of atrial electrogram and reset of the tachycardia



Results

- 126 patients with AVNRT



	Absence of UCP (N=120)	Presence of UCP (N=4)	Indeterminate (N=1)
Female (n, %)	88 (67.7)	3 (75)	1 (100)
Age (mean ± SD)	68 ± 6.21	53.7 ± 17.4	29
Typical/Atypical AVNRT	120/2	4/0	1/0



Conclusion

- Limitation in Atypical AVNRT and
Atypical extension of slow pathway
- The prevalence of UCP could be lower than 3% of AVNRT cases
- The LAPD maneuver revealed that most AVNRTs did not exhibit a single UCP



Thank you for listening

