Komorová ektopie v péči ambulantního kardiologa

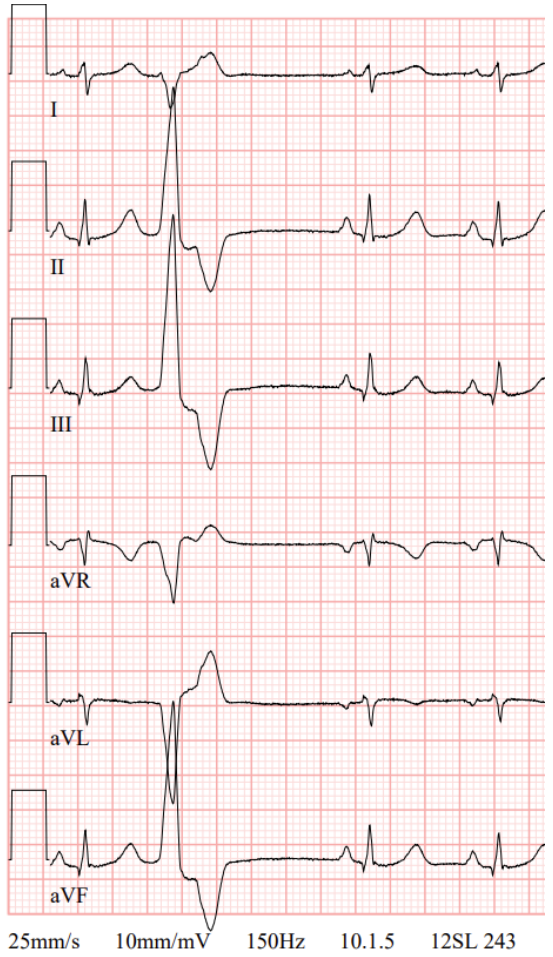
MUDr. Predrag Stojadinović, Ph.D.
Institut klinické a experimentální medicíny (IKEM), Praha

XXXIV. VÝROČNÍ SJEZD ČESKÉ KARDIOLOGICKÉ SPOLEČNOSTI
11.5.2026, Brno

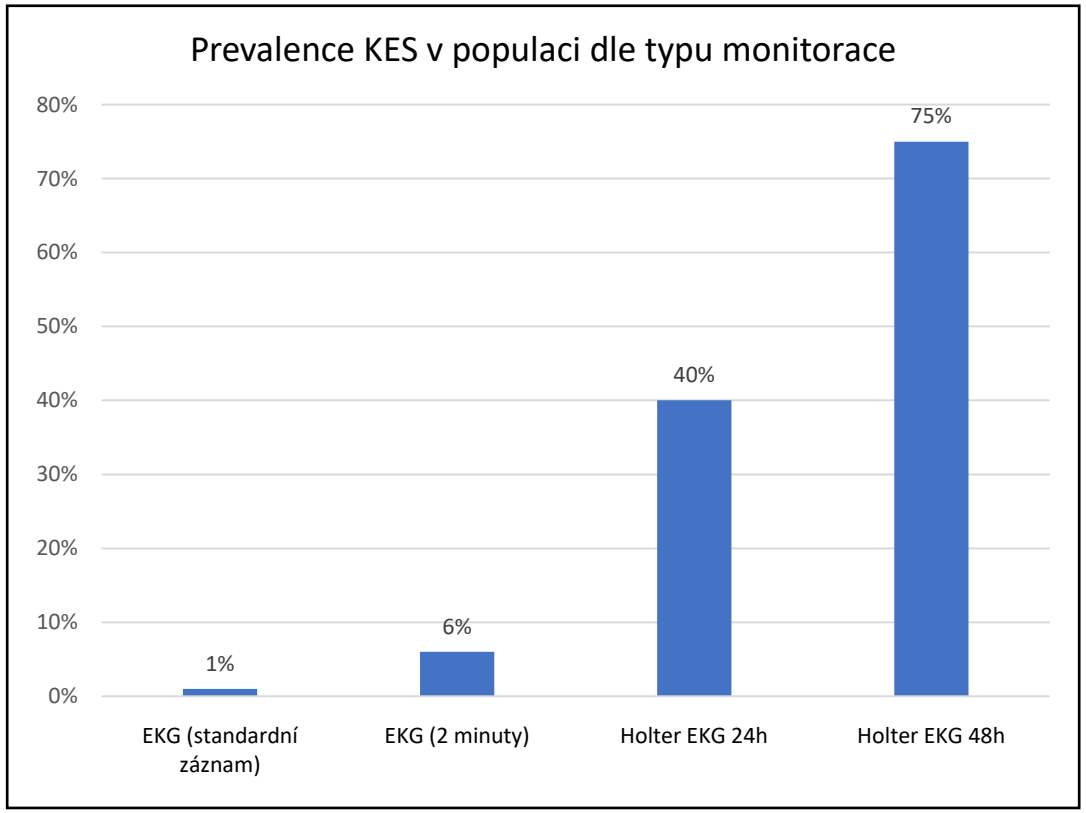
Úvod

- Přečasná elektrická aktivace komor (myokard, převodní systém)

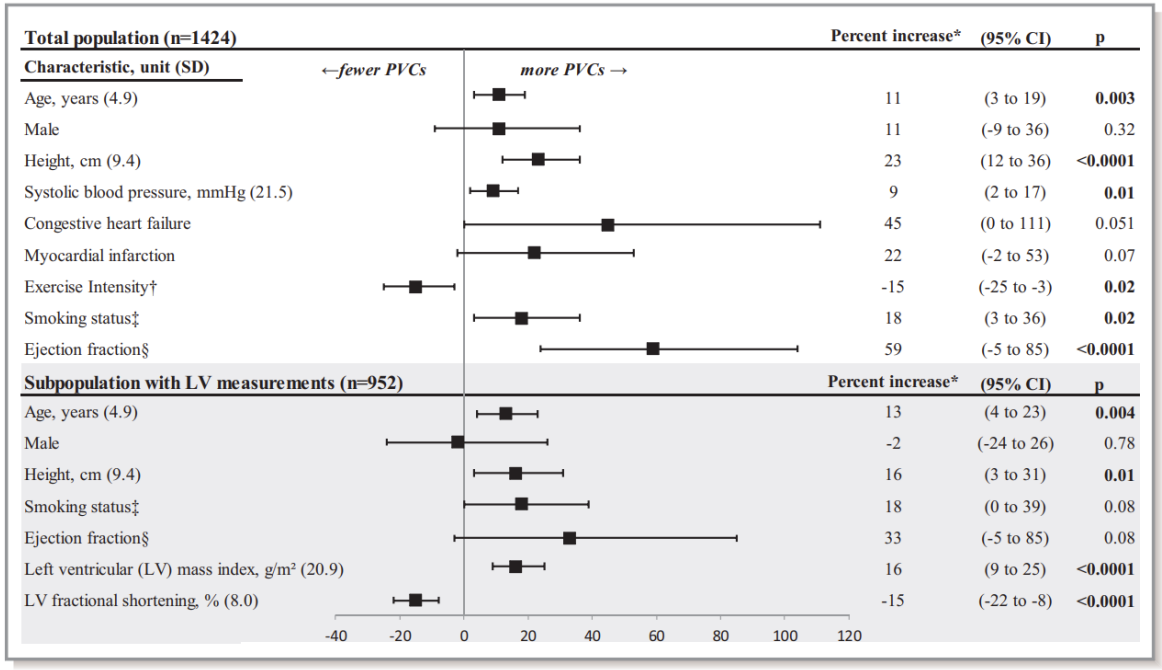
- Izolované/komplexní formy (kuplet, triplet/bi-tri-kvadrigeminie)
- Monomorfní/polymorfní
- Interpolované/komplenzační pauza/fuzní stah
- Idiopatické/strukturální onemocnění srce



Prevalence KES a rizikové faktory



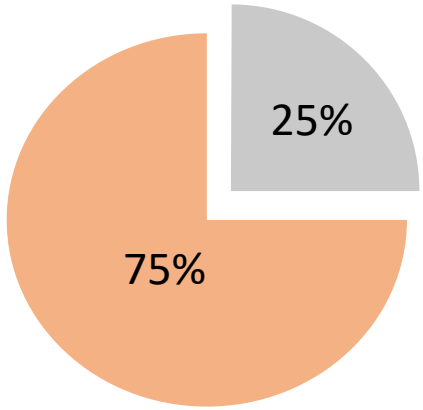
Simpson RJ Jr, et al. The Atherosclerosis Risk in Communities (ARIC) study. Am Heart J 2002; 143: 535



Karola et al., J Am Heart Assoc. 2018;7:e010078. DOI: 10. 1161/JAHA.118.010078.

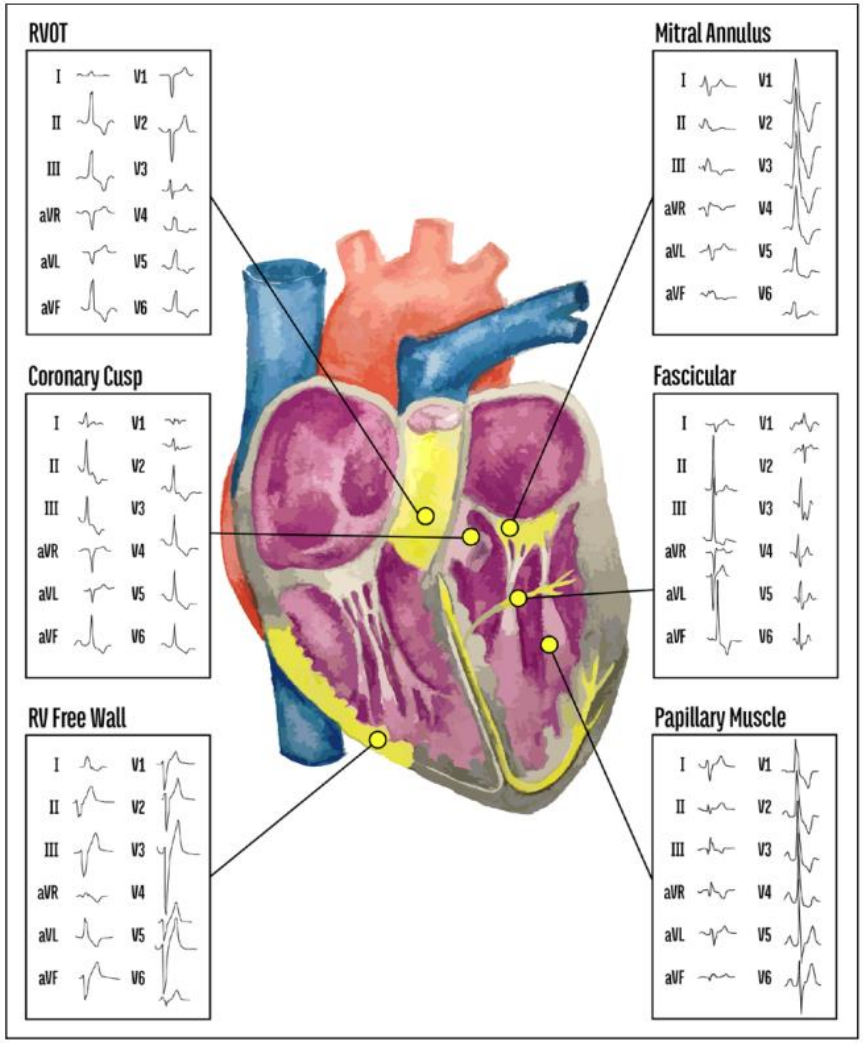
Nejčastější místa vzniku idiopatické ektopie

Výtokové trakty LK i PK



RVOT

LVOT, aortic cusps, LV summit, GCV region, Ao-Mi continuity



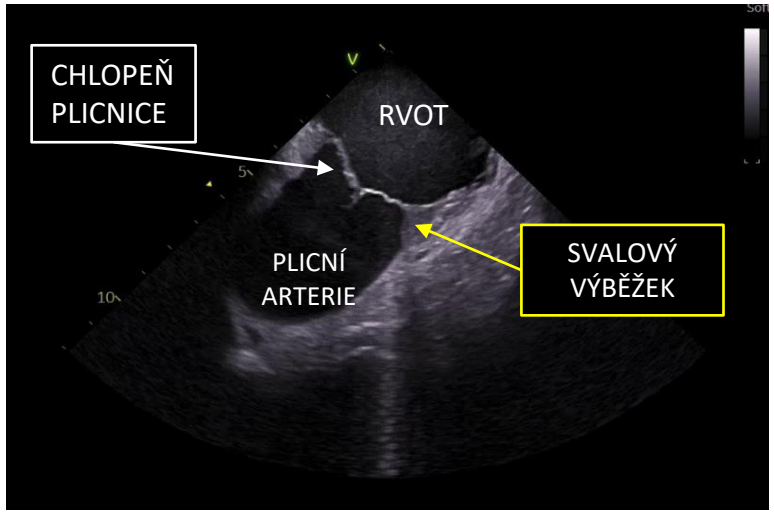
Méně časté zdroje

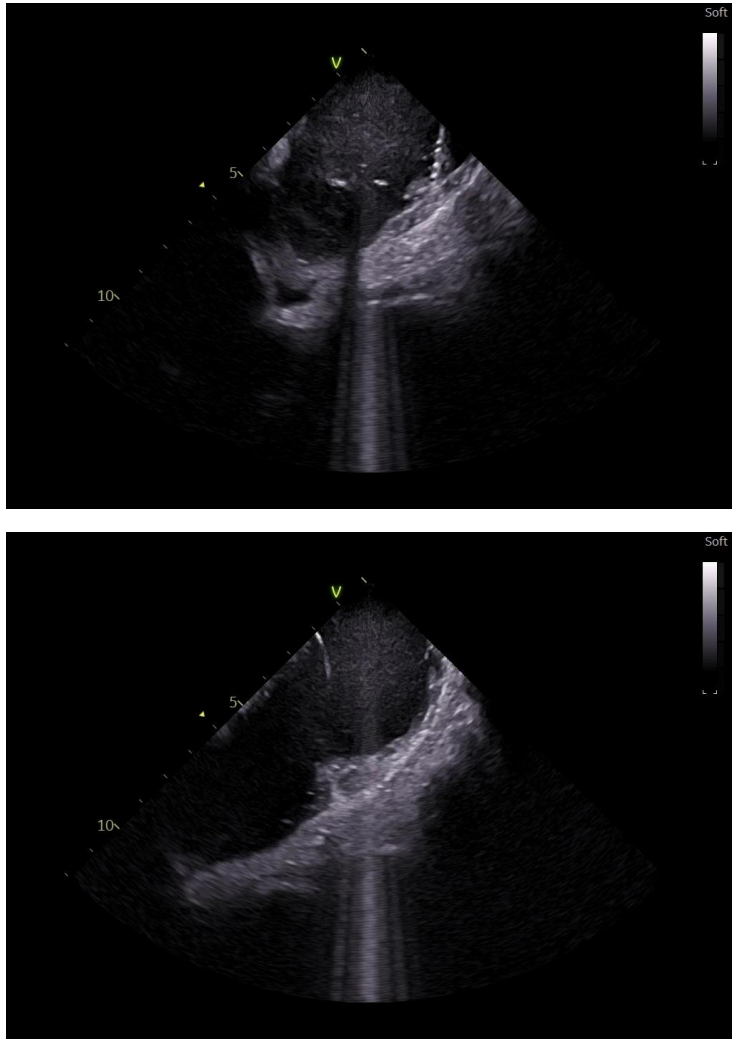
Papilární svaly
Fascikulární KT
Moderator band
Volná stěna PK

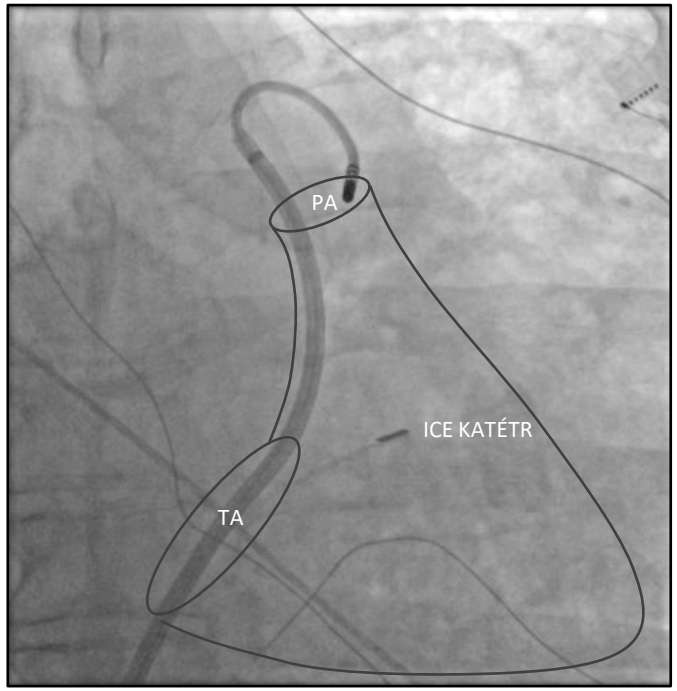
Mechanismus vzniku

Reentry
Abnormální automacie
Spouštěná aktivita

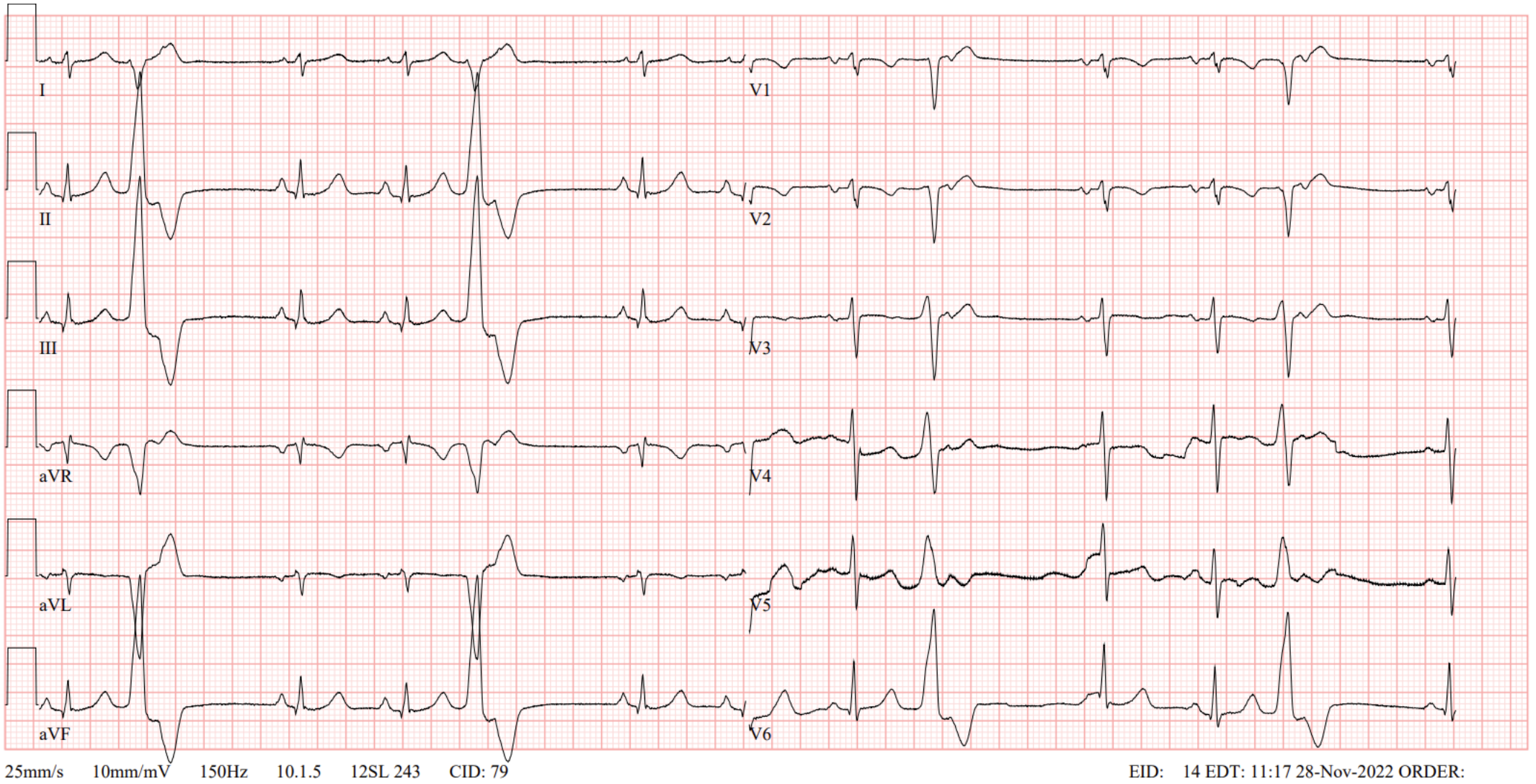
Extenze svaloviny nad pulmonální anulus







RVOT


I
II
III
aVR
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V1
V2
V3
V4
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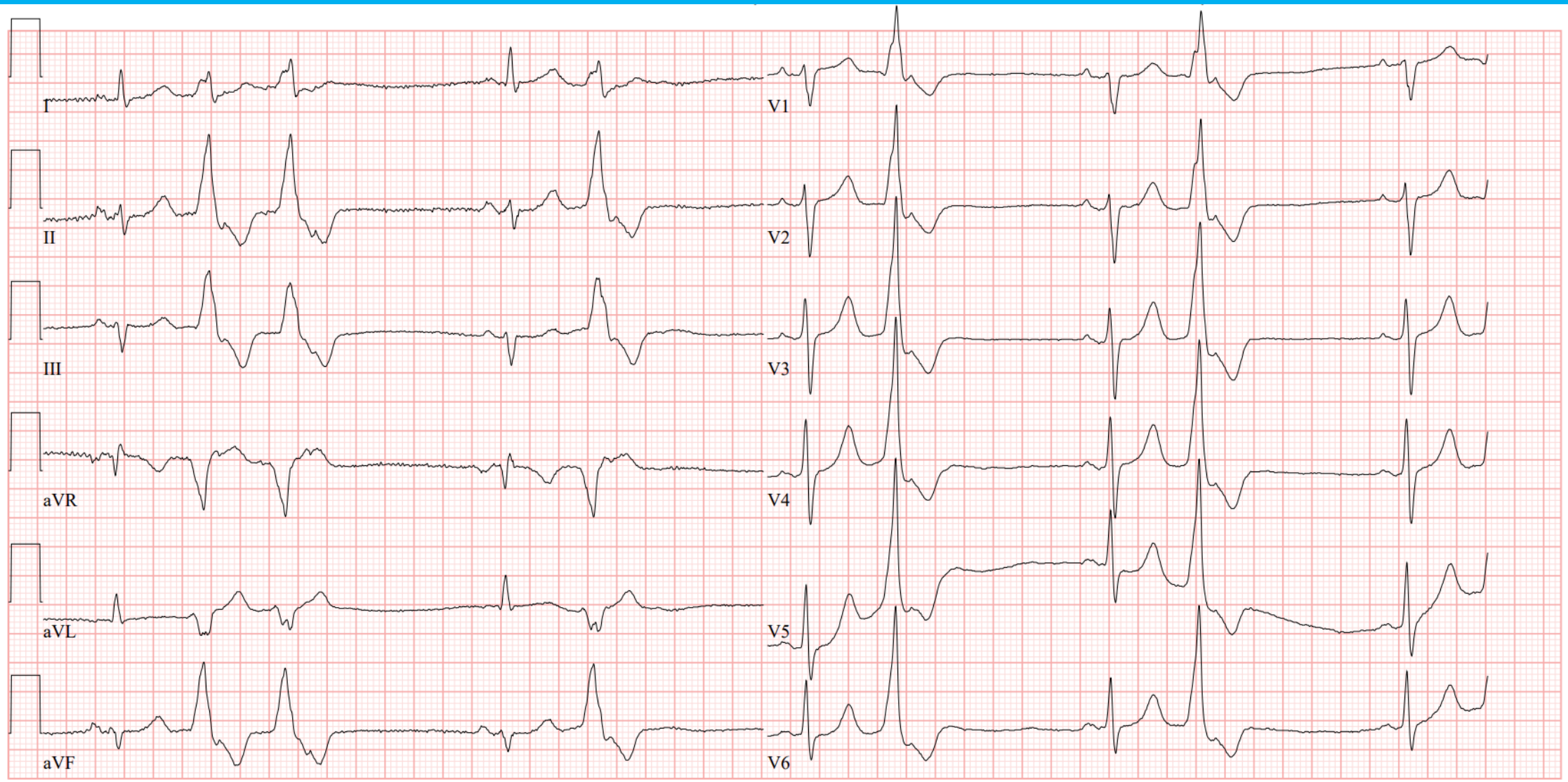
25mm/s 10mm/mV 150Hz 10.1.5 12SL 243 CID: 79
EID: 14 EDT: 11:17 28-Nov-2022 ORDER:

LVOT


I
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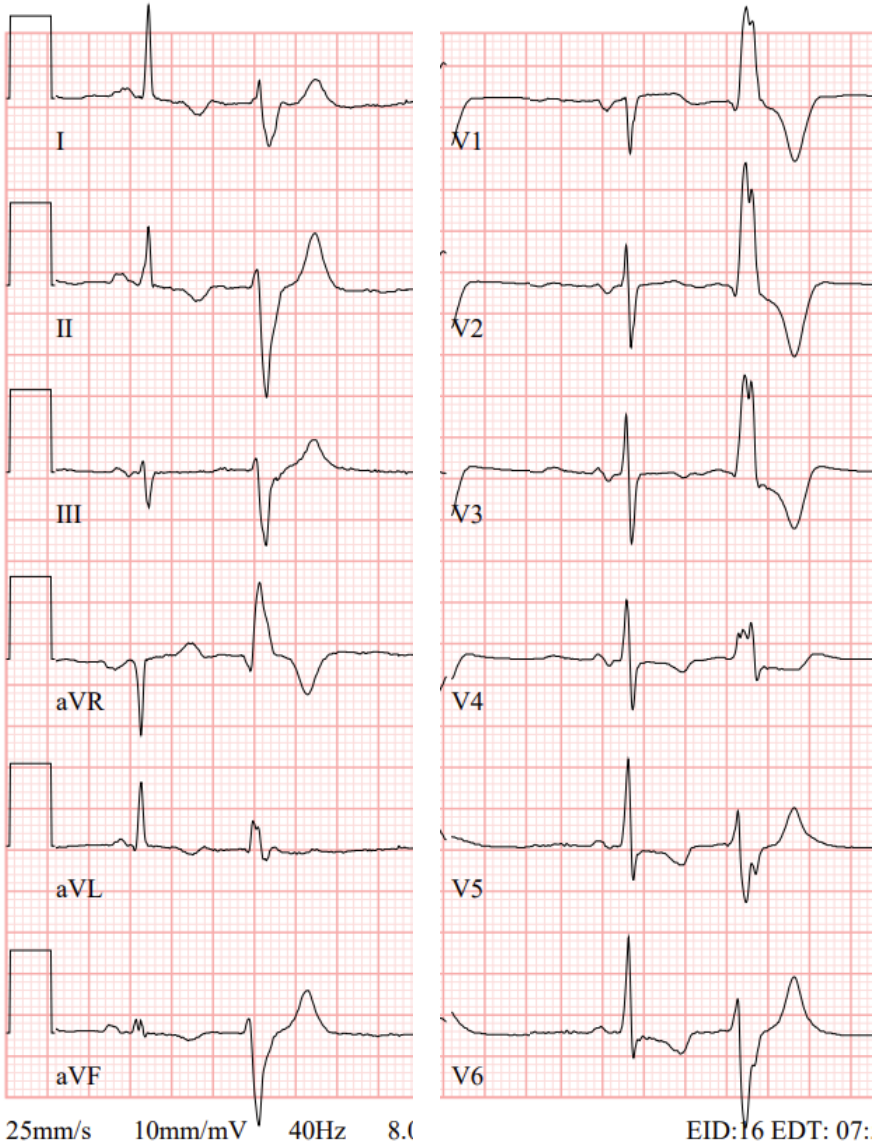
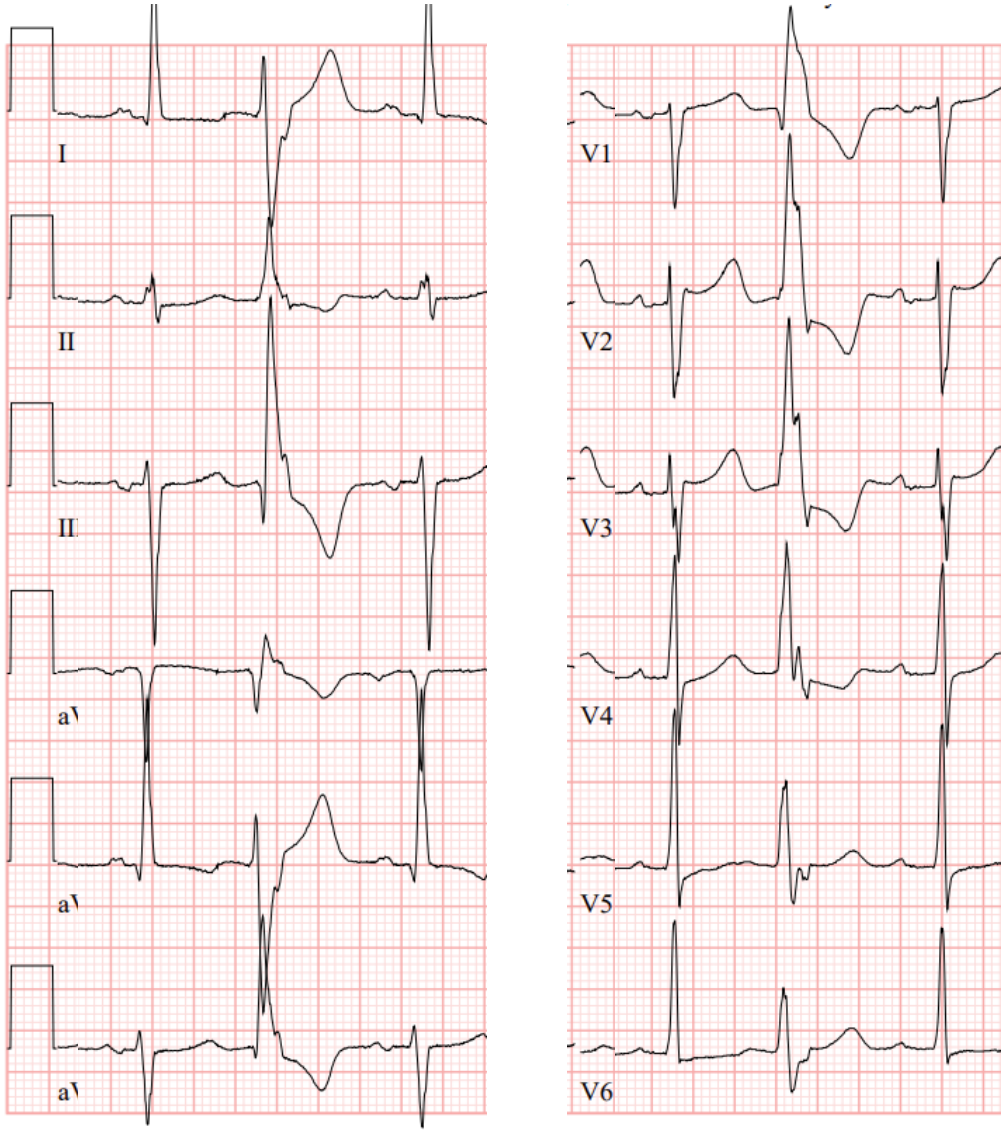
25mm/s 10mm/mV 40Hz 8.0.1 12SL 241 CID: 70
EID:16 EDT: 15:13 19-AUG-2021 ORDER:

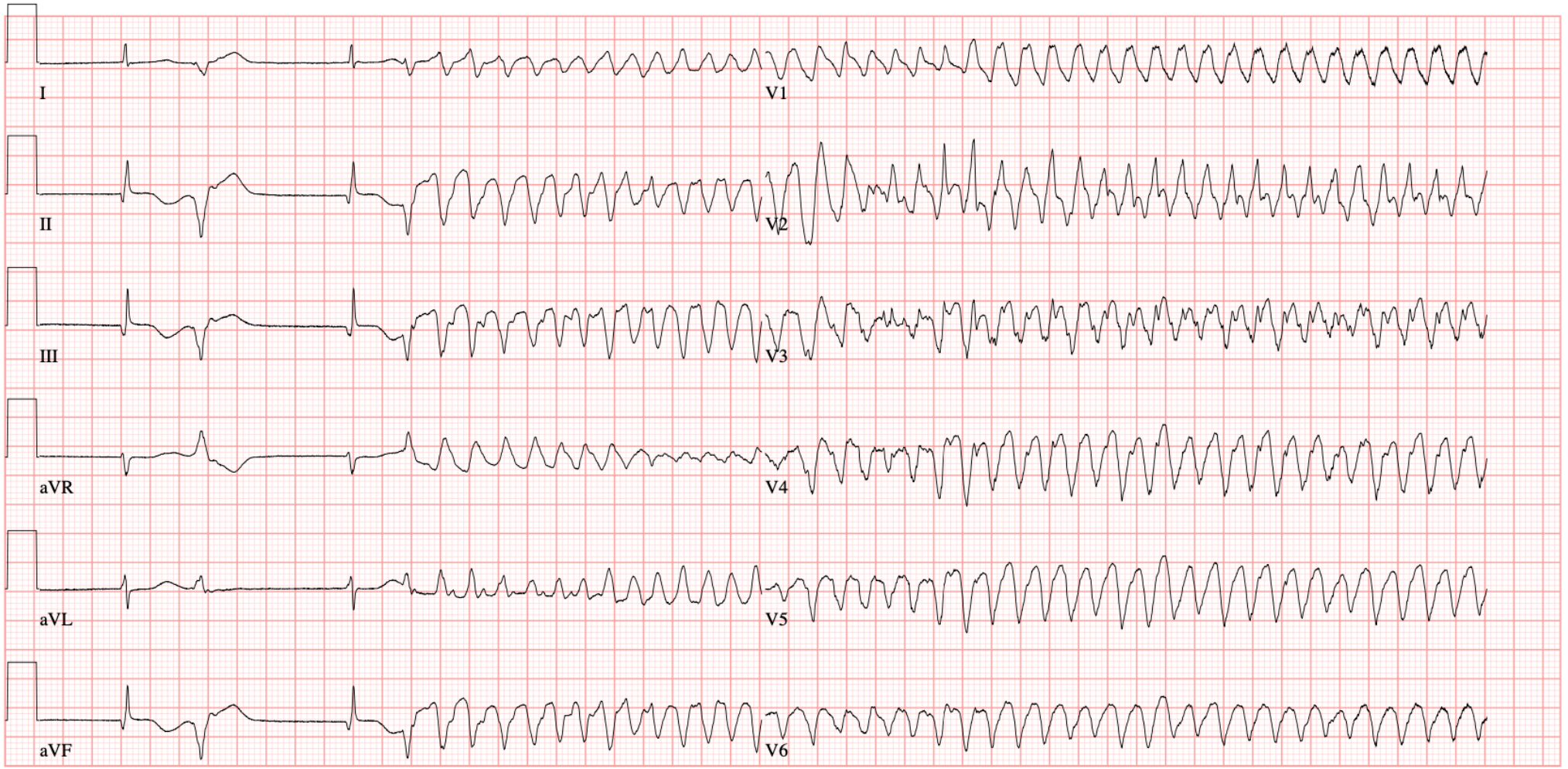
Posteromediální a anterolaterální papilární sval LK





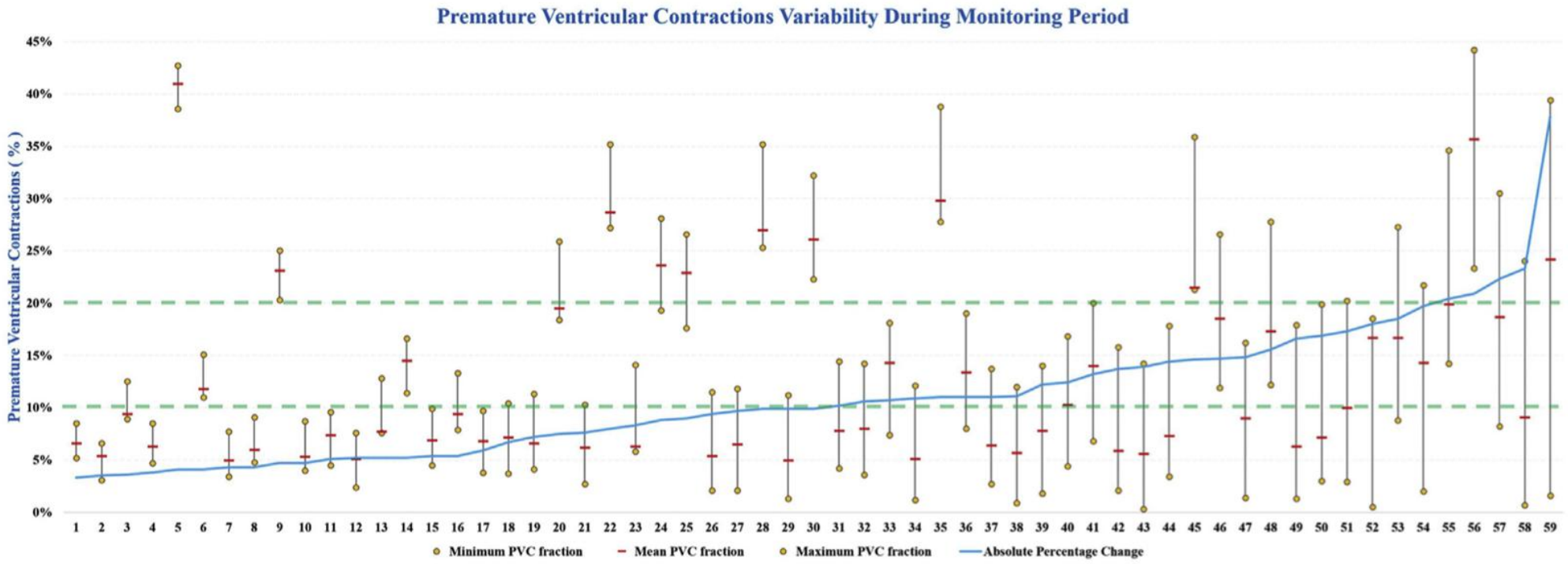
CPVT

KES spouštějící polymorfní KT nebo fibrilaci komor



Denní zátěž KES je variabilní

14denní EKG monitorace u 59 pacientů s komorovou ektopií nad 5%



Vysoká zátěž

Střední zátěž

Nízká zátěž

Mullis et al., Heart Rhythm 2019;16:1570–1574

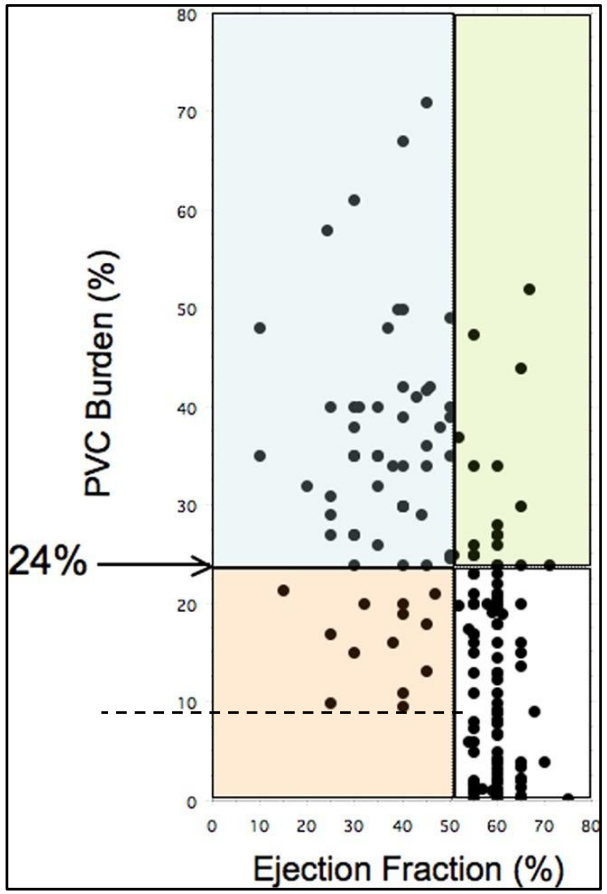
Komorovou extrasystolií indukovaná/mediovaná kardiomyopatie

Table 3 Cutoff data for the PVC burden based on data from the ROC curves with combined sensitivity and specificity

PVC burden (%)	Sensitivity (%)	Specificity (%)
10	100	46
16	90	58
21	80	75
27	70	88
30	60	91
34	50	91
35	40	94
39	30	95
41	20	96
50	10	99

ROC = receiver-operator characteristic; other abbreviations as in Table 2.

Baman et al, Heart Rhythm, 2010



Léčba komorové ektopie

Idiopathic PVC/VT and PVC-induced cardiomyopathy	
Catheter ablation as first-line treatment is recommended for symptomatic idiopathic VT/PVCs from the RVOT or the left fascicles.	I
Beta-blockers or non-dihydropyridine CCBs are indicated in symptomatic patients with idiopathic VT/PVCs from an origin other than the RVOT or the left fascicles.	I
In patients with PVCs/VT and a presentation not typical for an idiopathic origin,[c] CMR should be considered, despite a normal echocardiogram.	IIa
Beta-blockers, non-dihydropyridine CCBs or flecainide should be considered when catheter ablation is not available, not desired, or is particularly risky in symptomatic patients with idiopathic VT/PVCs from the RVOT or the left fascicles.	IIa
Catheter ablation or flecainide should be considered in symptomatic patients with idiopathic VT/PVCs from an origin other than the RVOT or the left fascicles.	IIa
In patients with an unexplained reduced EF and a PVC burden of at least 10%, PVC-induced cardiomyopathy should be considered.	IIa
In patients with suspected PVC-induced cardiomyopathy, CMR should be considered.	IIa
In non-responders to CRT with frequent, predominately monomorphic PVCs limiting optimal biventricular pacing despite pharmacological therapy, catheter ablation or AADs should be considered.	IIa
Catheter ablation may be considered for idiopathic VT/PVCs in asymptomatic patients with repeatedly more than 20% of PVCs per day at follow-up.	IIb
Amiodarone as a first-line treatment is not recommended in patients with idiopathic VTs/PVCs.	III

PVC-induced cardiomyopathy	
In patients with a cardiomyopathy suspected to be caused by frequent and predominately monomorphic PVCs, catheter ablation is recommended.	IIa → I

2022 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death

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DEPARTMENT OF CARDIOLOGY

Kdo má mít ablaci komorové ektopie?

1. Symptomatický pacient s KES.

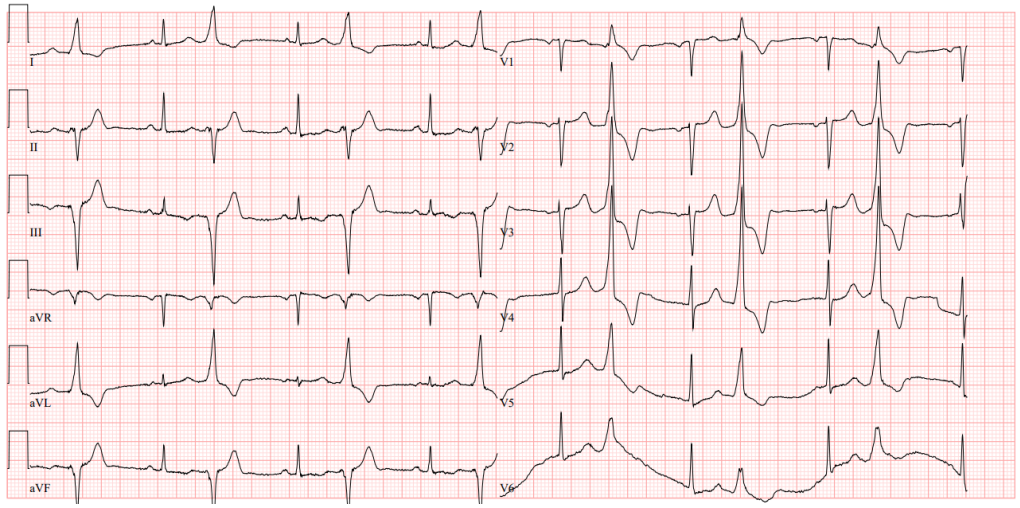
2. Asymptomatický pacient s četnými KES (nad 20 000/24hod).

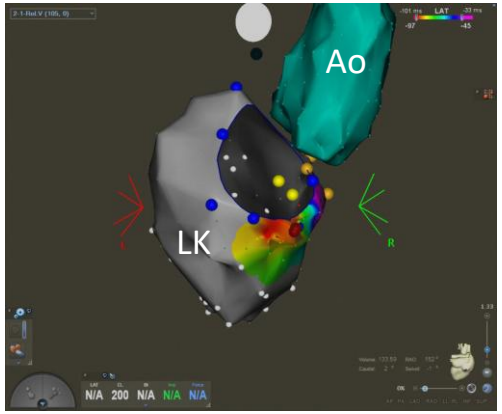
3. Pacient s dysfunkcí LK indukovanou/mediovanou KES.

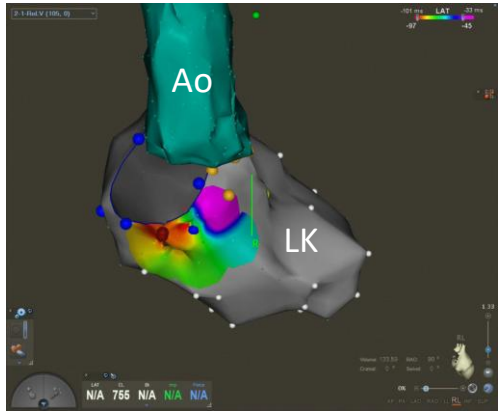
4. Pacient s KES interferující s CRT stimulací.

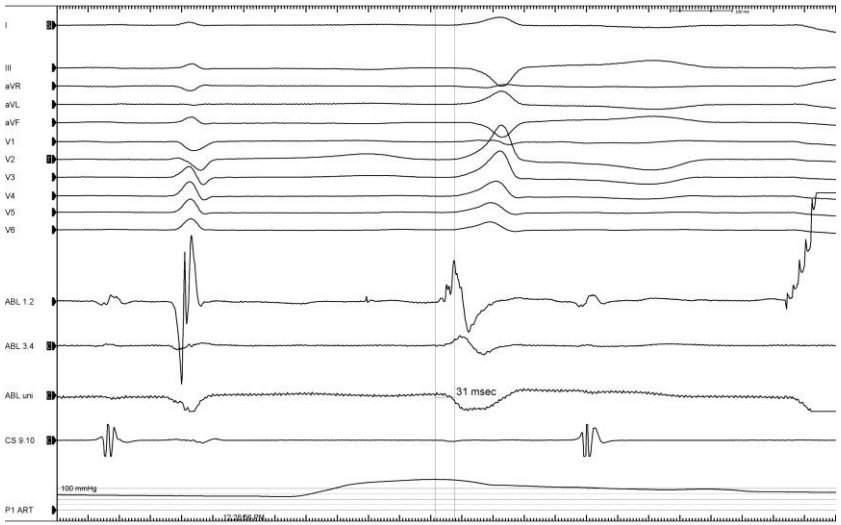
5. Pacient s KT/FiK spouštěnou KES.

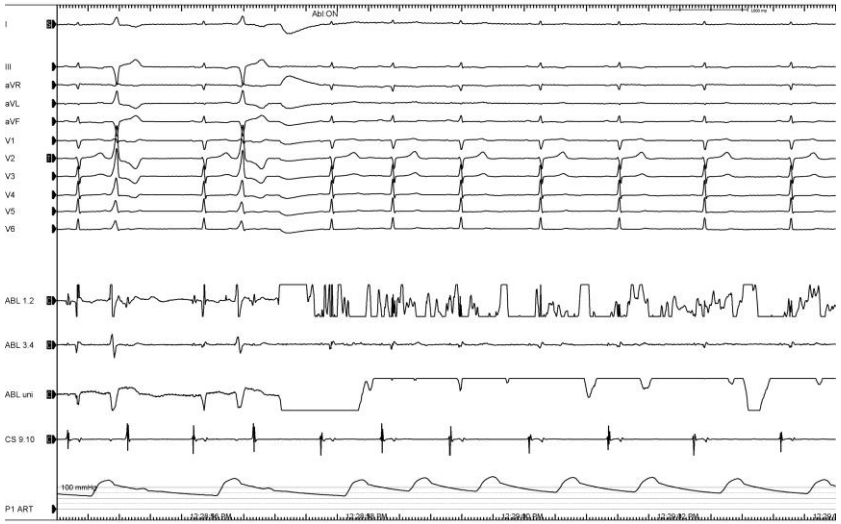
Katetrizační ablace komorové ektopie









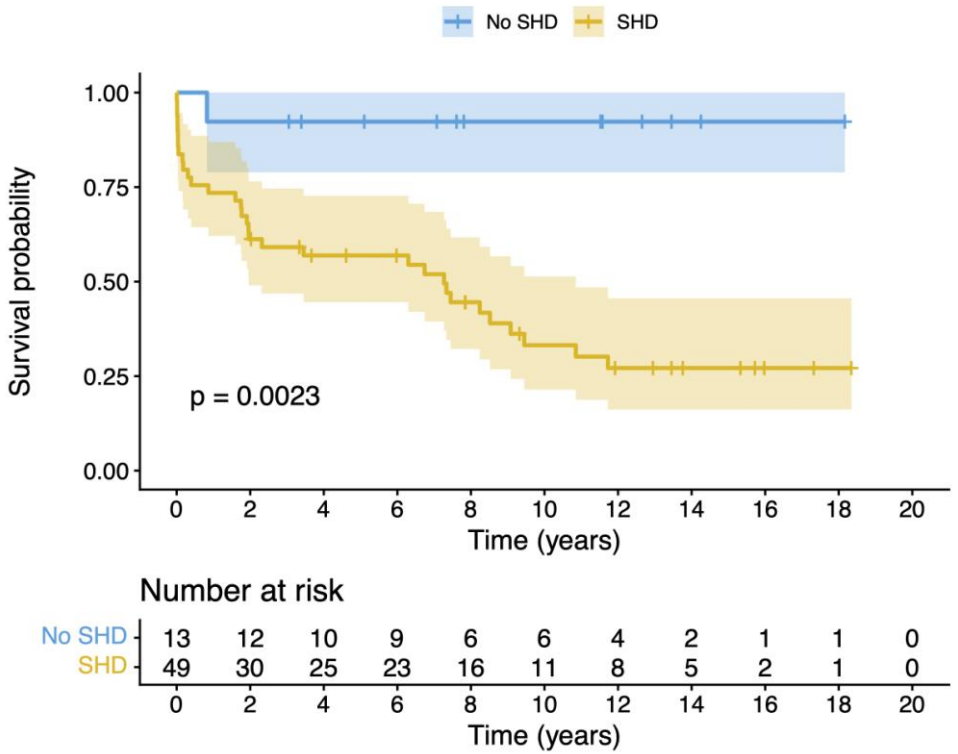


Komplikace katetrizační ablace komorové ektopie

Table 2. Major Complications

Type of Complication	Total (n=722)	Idiopathic VT (n=249)	SHD-VT (n=473)
Death	0	0	0
Perforation	3 (0.4%)	0 (0.0%)	3 (0.6%)
Tamponade	2	0	2
Hemopericardium	1	0	1
Thromboembolic event	5 (0.7%)	1 (0.4%)	4 (0.8%)
Stroke intraprocedural	2	0	2
TIA intraprocedural	1	1	0
TIA <7 d	1	0	1
Systemic embolism (legs)	1	0	1
Conduction system damage	7 (1.0%)	1 (0.4%)	6 (1.3%)
AV block	6	1	5
LBBB resulting in HF	1	0	1
Other	4 (0.6%)	1(0.4%)	3 (0.6%)
Pericarditis	1	1	0
RV lead dysfunction	1	0	1
CPR during the procedure	2	0	2
Vascular access	26 (3.6%)	4 (1.6%)	22 (4.7%)
Femoral pseudoaneurysm	14	2	12
Femoral AVF	5	2	3
Groin hematoma			
With surgical management	3	0	3
With transfusion needed	3	0	3
With conservative management	1	0	1
Total	45 (6.2%)	7 (2.8%)	38 (8.0%)

Katetrizační ablace pro fokální spouštěnou polymorfní KT a fibrilace komor



Peichl et al, 2014, Circ Arrhythm Electrophysiol

Závěr

- Komorové extrasystoly jsou časté
- Idiopatické mají většinou benigní povahu
- Pro kolísavou zátěž KES je vhodné opakovat/prodloužit Holter EKG monitoraci
- Katetrizační ablace u indikovaných pacientů je nejúčinnější léčebnou modalitou KES
- Dokumentace komorové ektopie na 12svodovém EKG
- Komorové extrasystoly můžou být projevem geneticky podmíněných arytmogenních syndromů
- Vyloučit strukturální onemocnění srdce u všech pacientů
- Amiodaron do léčby idiopatických extrasystol nepatří

Děkuji za pozornost!

Predrag Stojadinović

stop@ikem.cz