



Dysautonomia

Overview, Causes, Symptoms,
Diagnosis, and Management

Syncope

ECG

Cases

DAVID BELLO, MD

cvcfl symposium



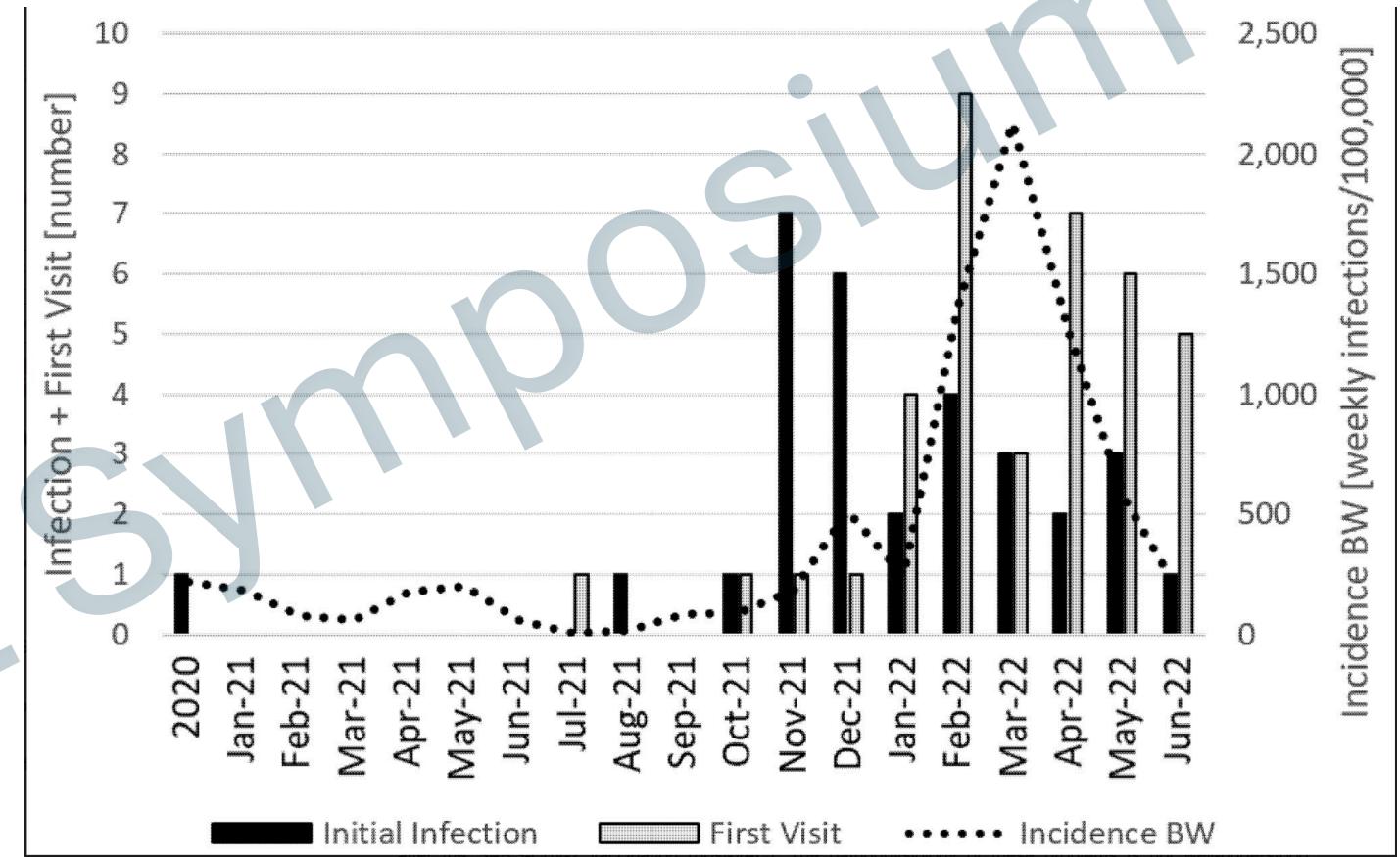
What is Dysautonomia?

1. • Dysautonomia refers to a group of disorders affecting the autonomic nervous system (ANS).
2. • The ANS controls involuntary body functions such as heart rate, blood pressure, digestion, and temperature regulation.
3. • Imbalance can cause a wide range of symptoms.



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Types of Dysautonomia



- Postural Orthostatic Tachycardia Syndrome (POTS)
- Neurocardiogenic Syncope (NCS)
- Inappropriate Sinus Tachycardia (IST)
- Pure Autonomic Failure (PAF)
- Secondary dysautonomia (e.g., diabetes, Parkinson's disease)
- Multiple System Atrophy (MSA)

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GENETIC: EDS
ENDOCRINE
AUTOIMMUNE
MAST CELL ACT
CHRONIC DZ

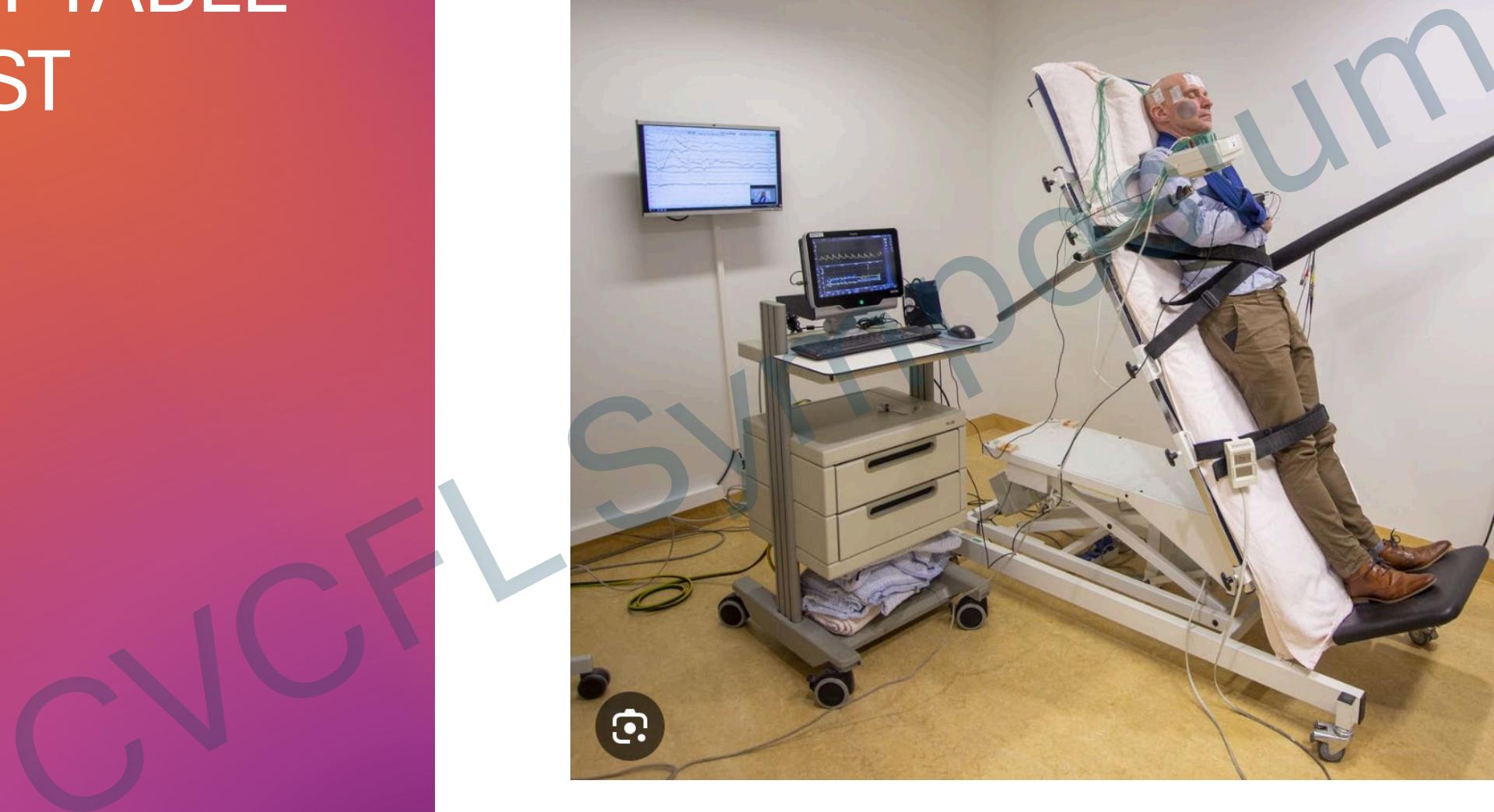
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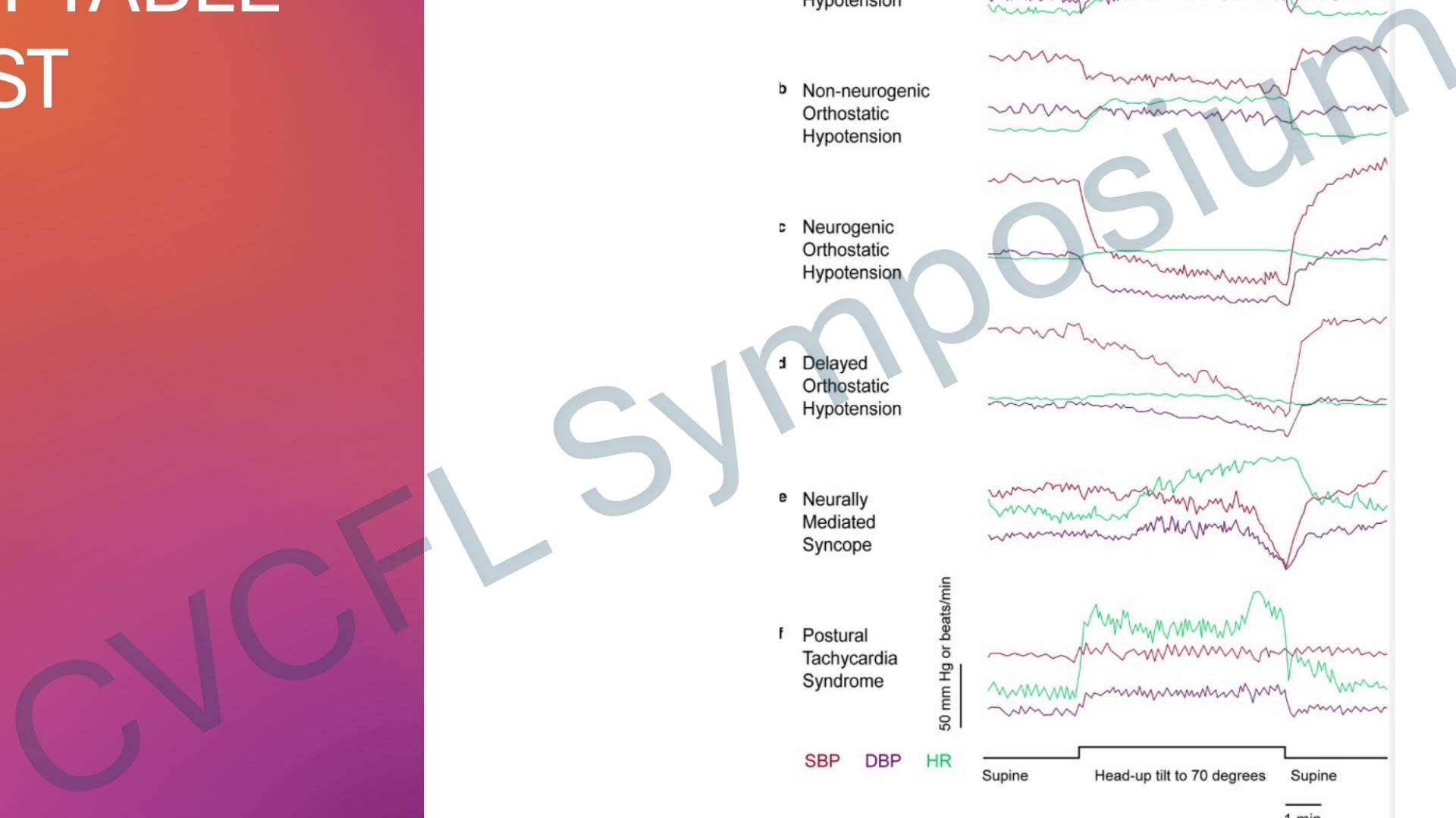
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TIlt TABLE TEST



TIlt Table Test



TIlt TABLE TEST

Table 1. Positive responses on tilt-table testing using the VASIS classifications.²¹

| Type | Response |
|-----------------------------|--|
| Type 1: mixed | <ul style="list-style-type: none">• Fall in blood pressure before fall in heart rate.• Fall in heart rate at time of syncope but no less than 40 beats/min• If a heart rate less than 40 beats/min but lasts less than 10 s with or without asystole of less than 3 s. |
| Type 2: cardioinhibitory | <ul style="list-style-type: none">• Cardioinhibition without asystole. Heart rate falls to less than 40 beats/min for more than 10 s without asystole for 3 s or more. Blood pressure falls before fall in blood pressure.• Cardioinhibition with asystole. Asystole for more than 3 s. Blood pressure falls before or with fall in heart rate. |
| Type 3: vasodepressor | <ul style="list-style-type: none">• Blood pressure falls to less than 80 mmHg. Heart rate does not fall more than 10% of peak to syncope. |

POTS TREATMENT

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IV Therapy: The Game-Changer for POTS Symptoms!

by Cory Courneya in Nutrition / IV Therapy Posted on 04/06/2024 23:41



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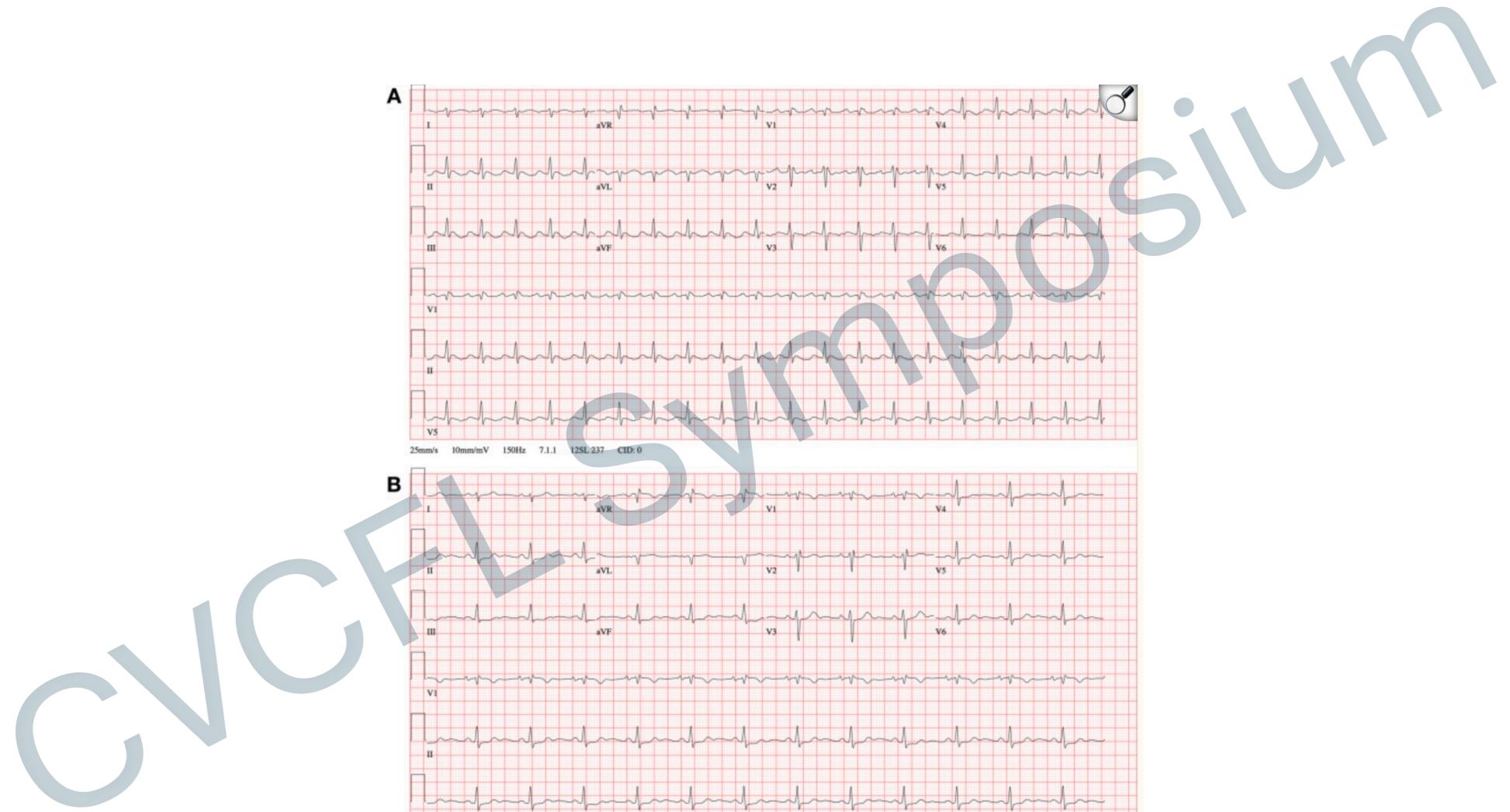
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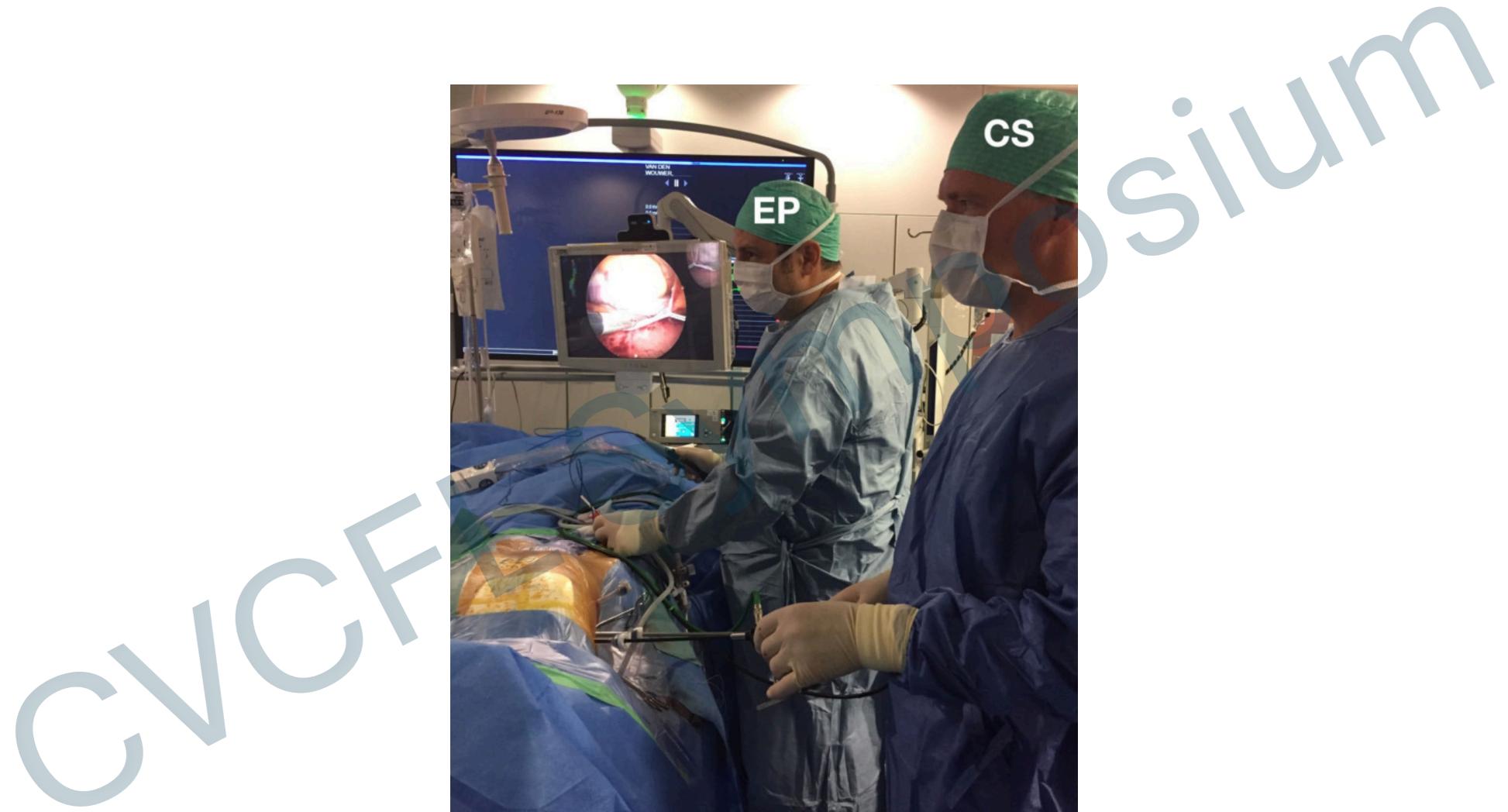
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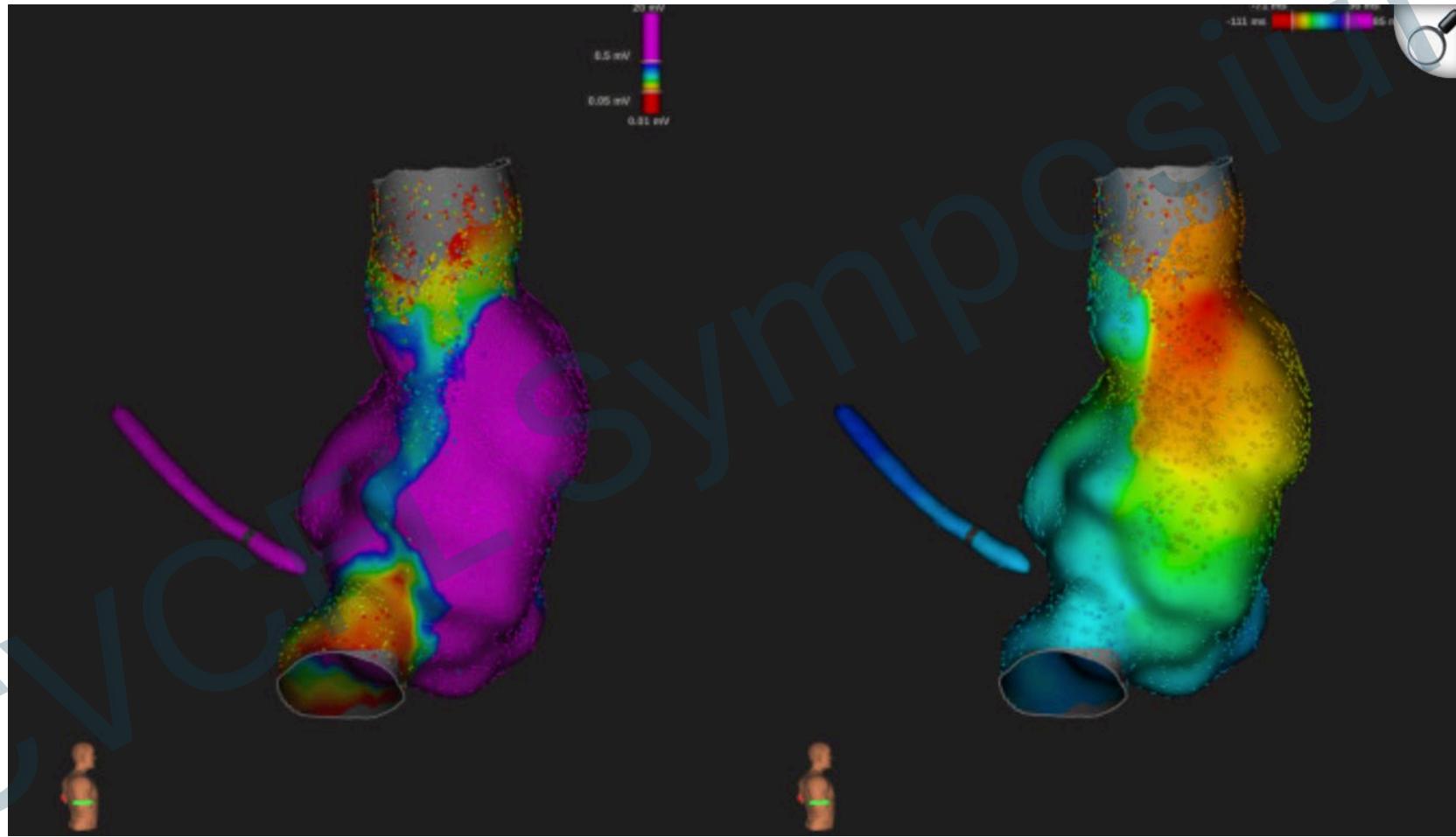


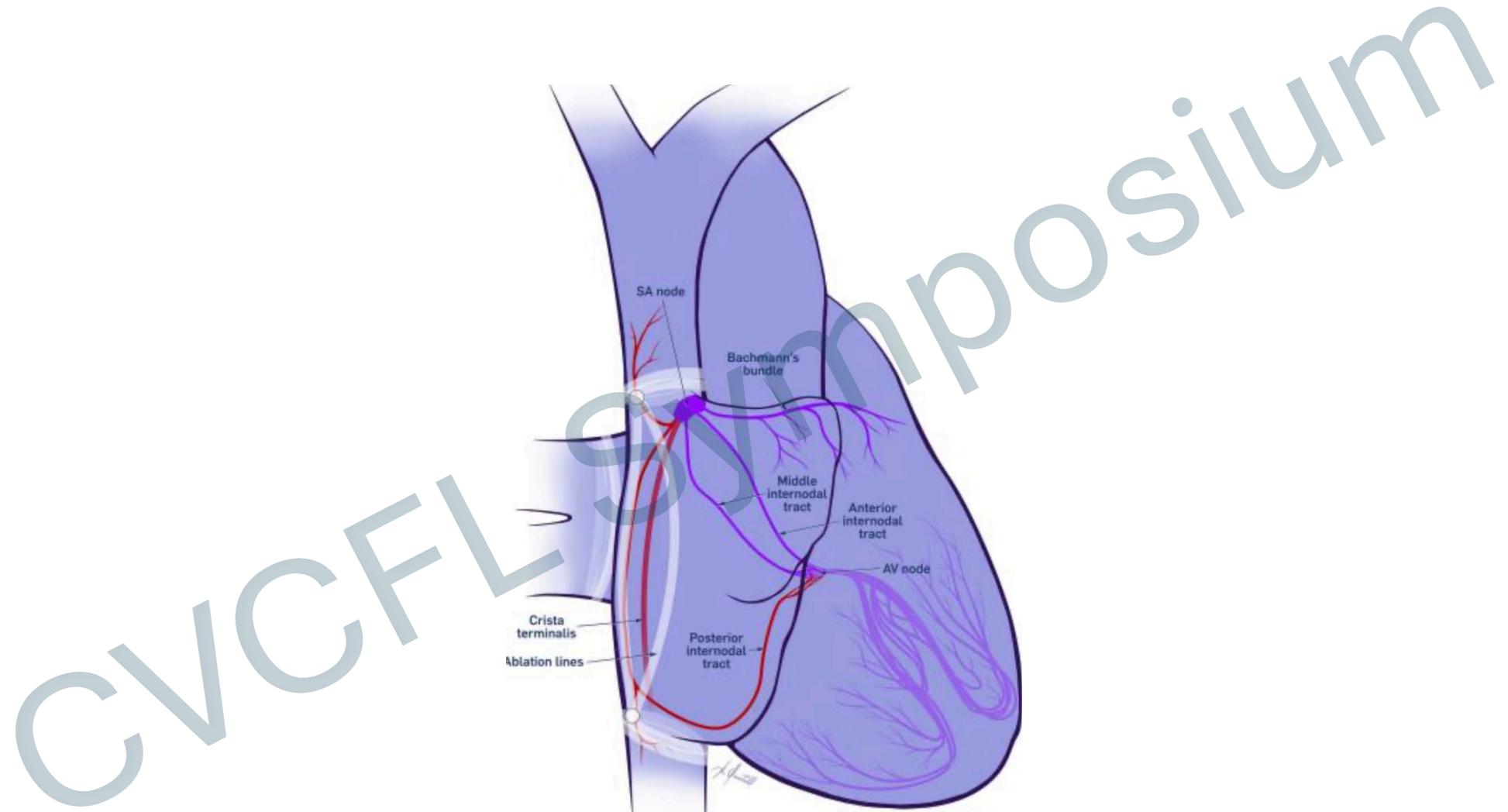
Sinus node sparing novel hybrid approach for treatment of inappropriate sinus tachycardia/postural sinus tachycardia: multicenter experience

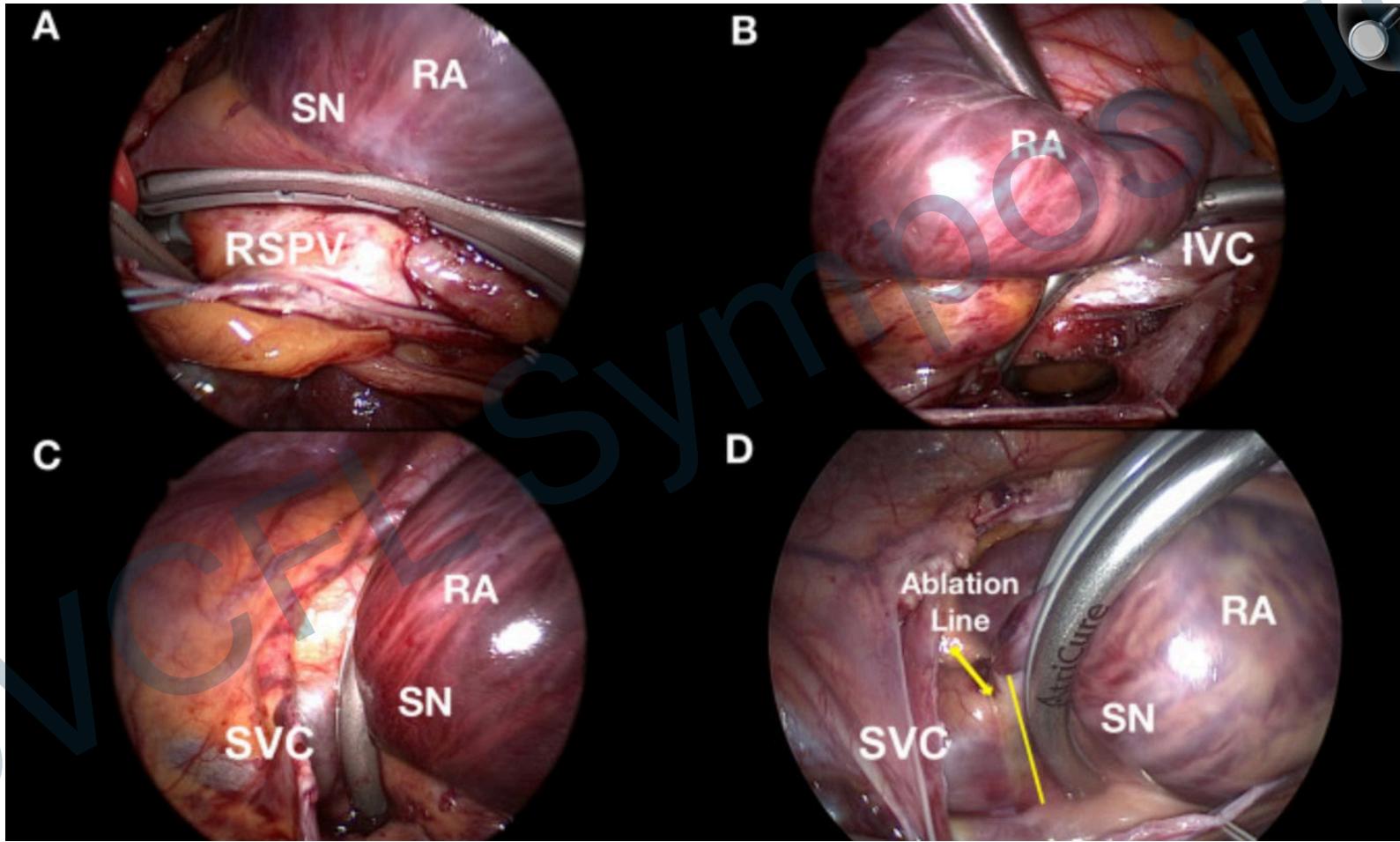
Carlo de Asmundis^{1,11,✉}, Gian-Battista Chierchia¹, Dhanunjaya Lakkireddy², Ahmed Romeya², Eric Okum³,
Gaurang Gandhi³, Juan Sieira¹, Margot Vloka⁴, Stephen D Jones⁴, Hemal Shah³, Marshall Winner³, Dilesh Patel
³, S Patrick Whalen⁵, Elijah H Beaty⁵, Edward Hal Kincaid⁵, Anson Lee⁶, Chad Brodt⁶, Benadict J Taylor⁴, Ilyas
Colombowala⁴, Matthew Romano⁷, Fred Morady⁷, Erwin Ströker¹, Ingrid Overeinder¹, Gezim Bala¹, Justin Van
Meeteren⁸, Yoaav Krauthammer⁸, Scott Koerber⁸, Christian Shults⁸, Athanasios Thomaides⁸, Nitish Badhwar⁶,
Rakesh Gopinathannair⁸, Alap Shah², Rangarao Tummala⁸, David Bello⁹, Steve Hoff⁹, Alexandre Almorad¹,
Kenneth Frazier¹, Pedro Brugada¹, Mark La Meir¹⁰











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AUTONOMIC DYSFUNCTION CENTER

CARDIOLOGY
NEUROLOGY
RHEUMATOLOGY
GENETICS
CARDIAC REHABILITAON
IV INFUSION CENTER
ENDOCRINE
CT SURGERY

The screenshot shows the homepage of The Cardiovascular Center of Florida. The header features the center's logo (a red heart shape) and the text "THE CARDIOVASCULAR CENTER OF FLORIDA". The navigation menu includes links for "ABOUT US", "FIND CARE", "TREATMENTS", "CONDITIONS", "PATIENT RESOURCES", and a prominent red "Schedule Now" button with a white arrow. A large, semi-transparent watermark reading "CVCFL Annual Symposium" is overlaid across the page. The main content area features the text "SAME TEAM. NEW HOME. Transforming Cardiovascular Healthcare - One Patient at a Time" in large, bold, dark text. Below this, there are three circular awards: "Orlando The City Magazine FINEST DOCTORS 2023", "Orlando The City Magazine FINEST DOCTORS 2024", and "CLERMONT 2025 Reader's Choice". To the right, there is a photograph of a male and a female doctor in white coats, looking at a screen displaying a heart rate monitor. A text box at the bottom right says "Any questions? We can help!" with a red "Ask" button. On the left side of the main content area, there is a vertical scroll bar with the text "SCROLL TO DISCOVER" and a small circular progress indicator.



Common Symptoms

CVCF

- Lightheadedness and fainting
- Rapid heart rate or palpitations
- Blood pressure fluctuations
- Fatigue and exercise intolerance
- Gastrointestinal disturbances
- Heat intolerance and abnormal sweating

Syncope

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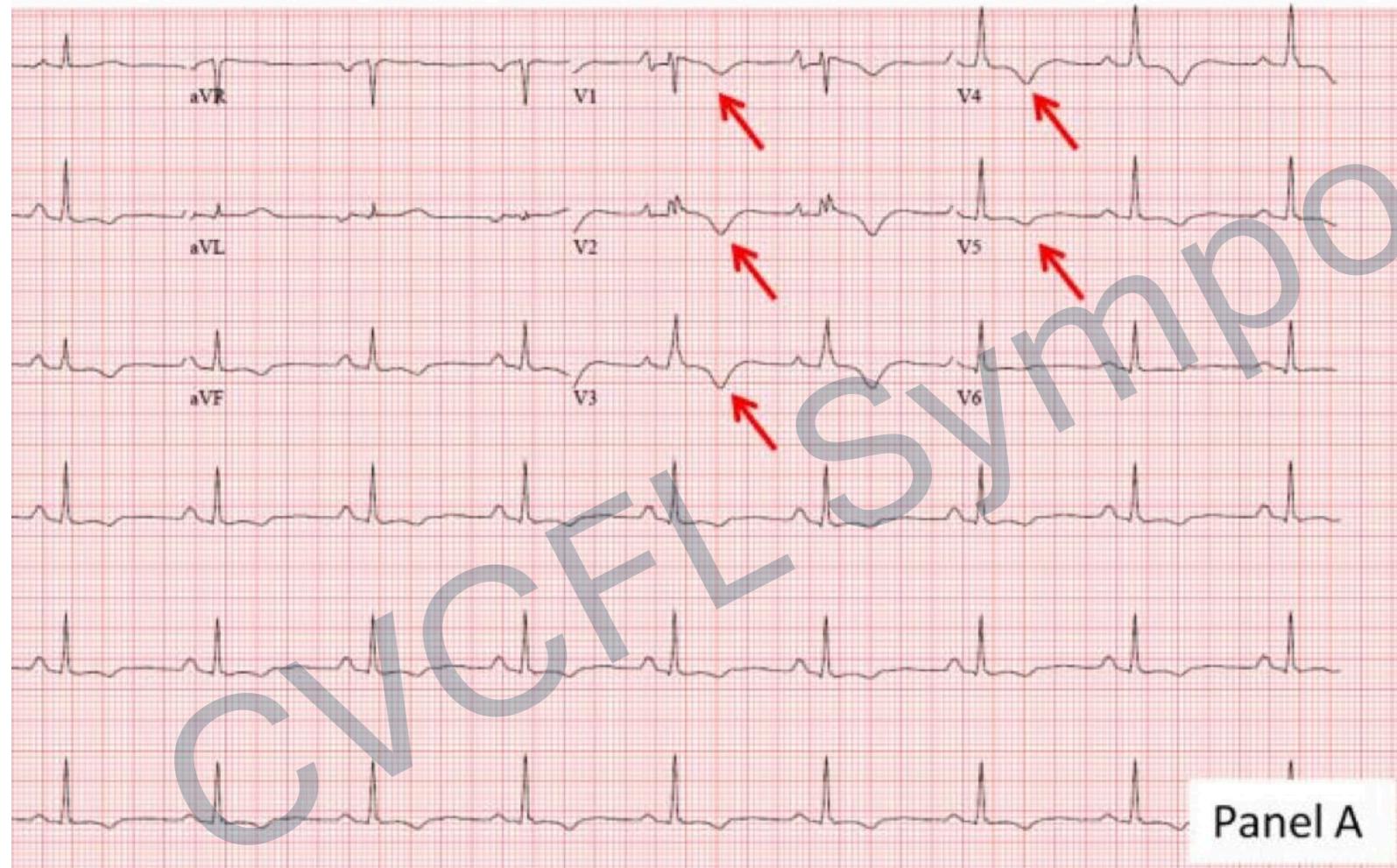
ECG OF DEATH

❖ AI Overview

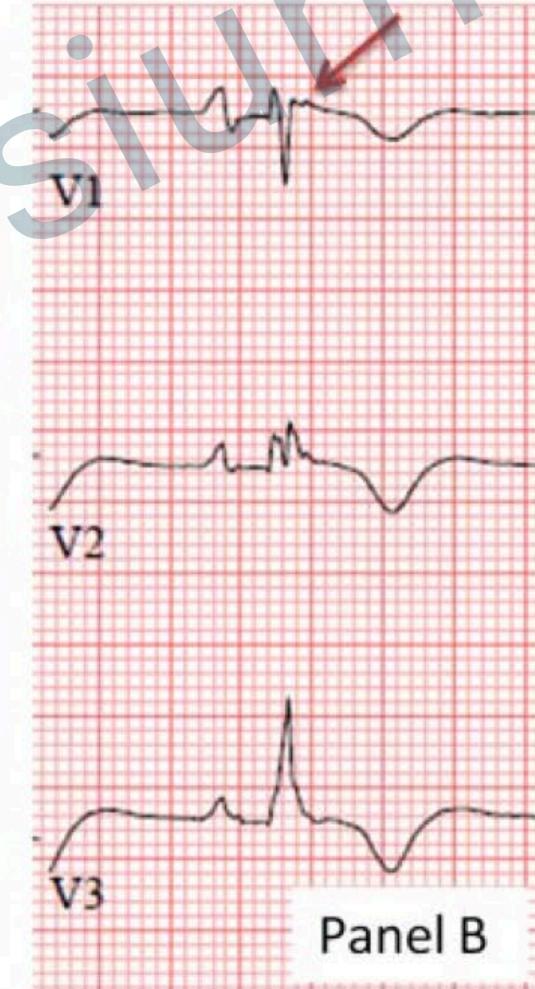
The quote, "Those who are subject to frequent and severe fainting attacks without obvious cause die suddenly," is attributed to Hippocrates and is considered the earliest description of sudden cardiac death. It describes how individuals who experience recurrent fainting spells without an apparent reason are at risk of dying suddenly, a phenomenon now linked to certain heart conditions like long QT syndrome, hypertrophic cardiomyopathy, and arrhythmogenic right ventricular dysplasia, which can lead to a fatal arrhythmia. 

- **Attribution:** Hippocrates, the "father of medicine," wrote this in his Aphorisms in the 4th century BC.

ECG OF DEATH



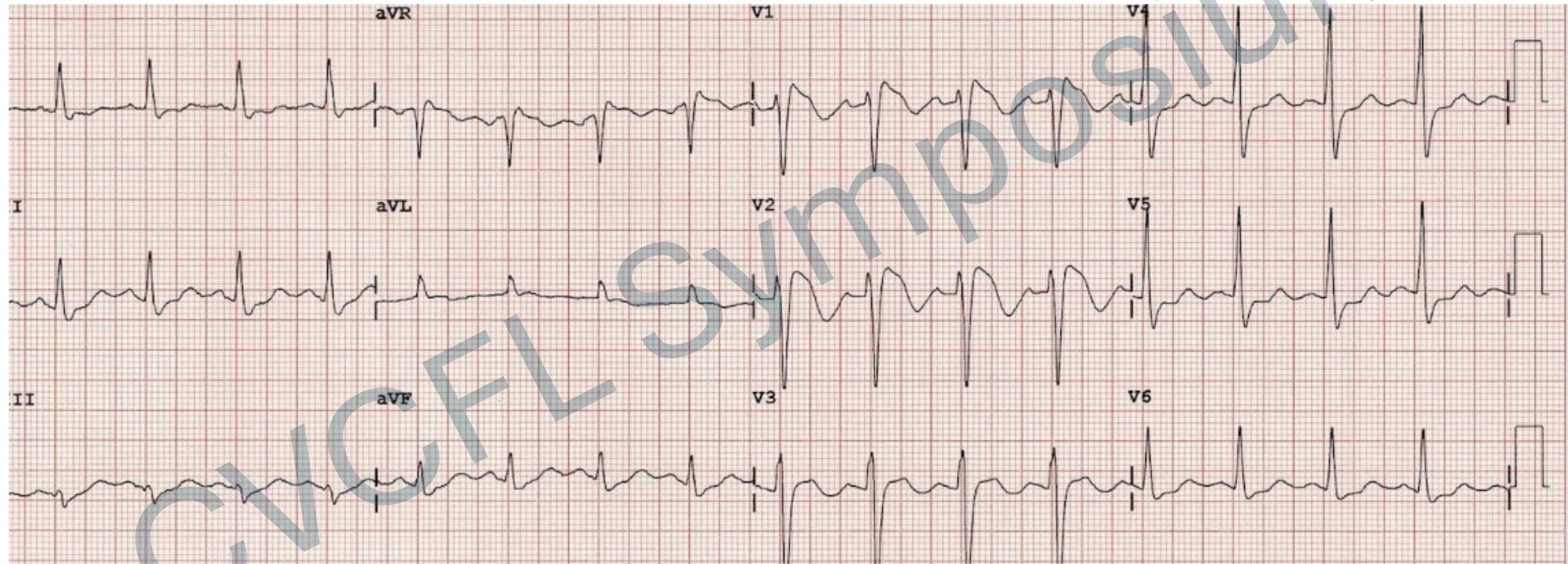
Panel A



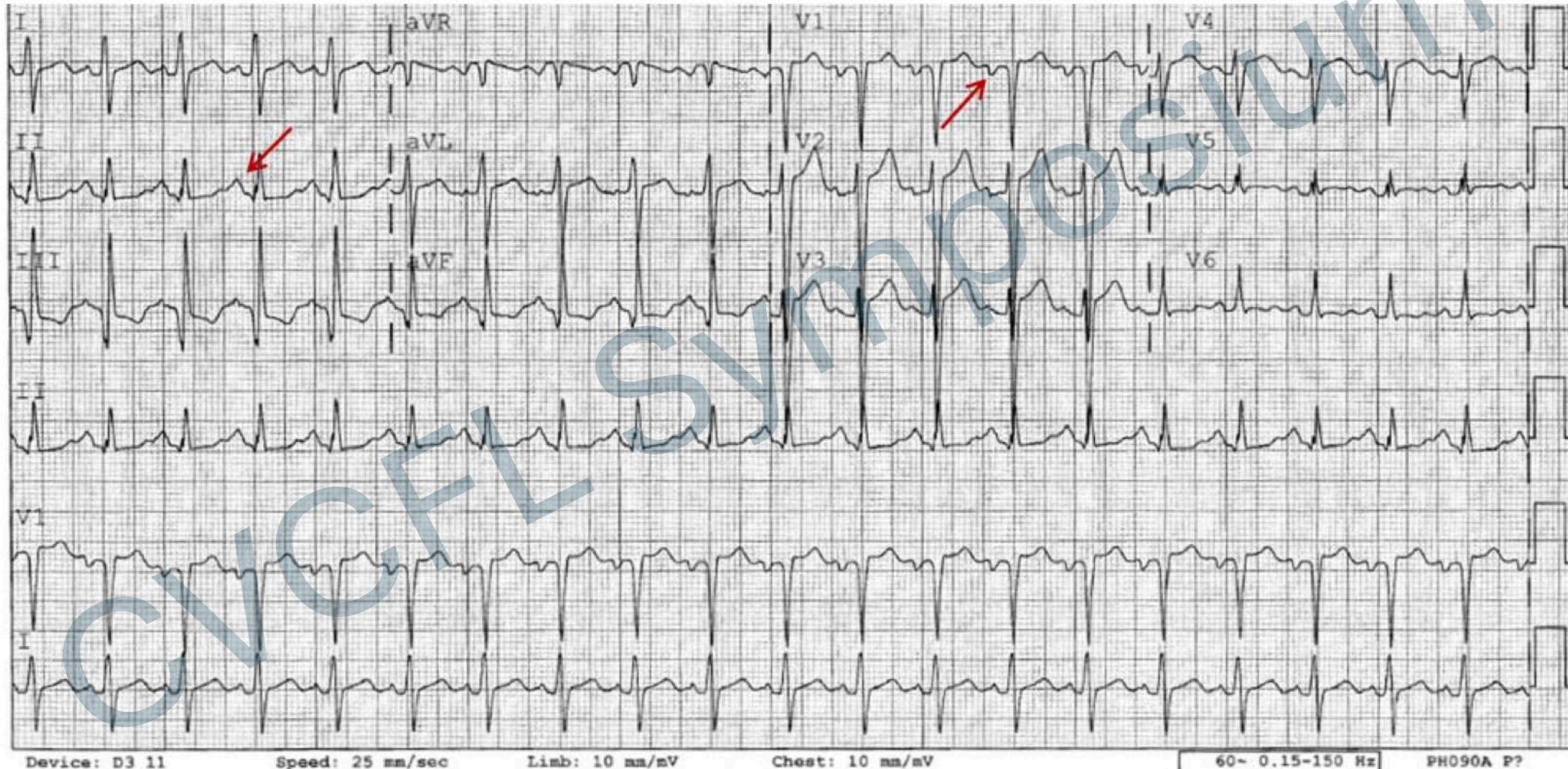
Panel B



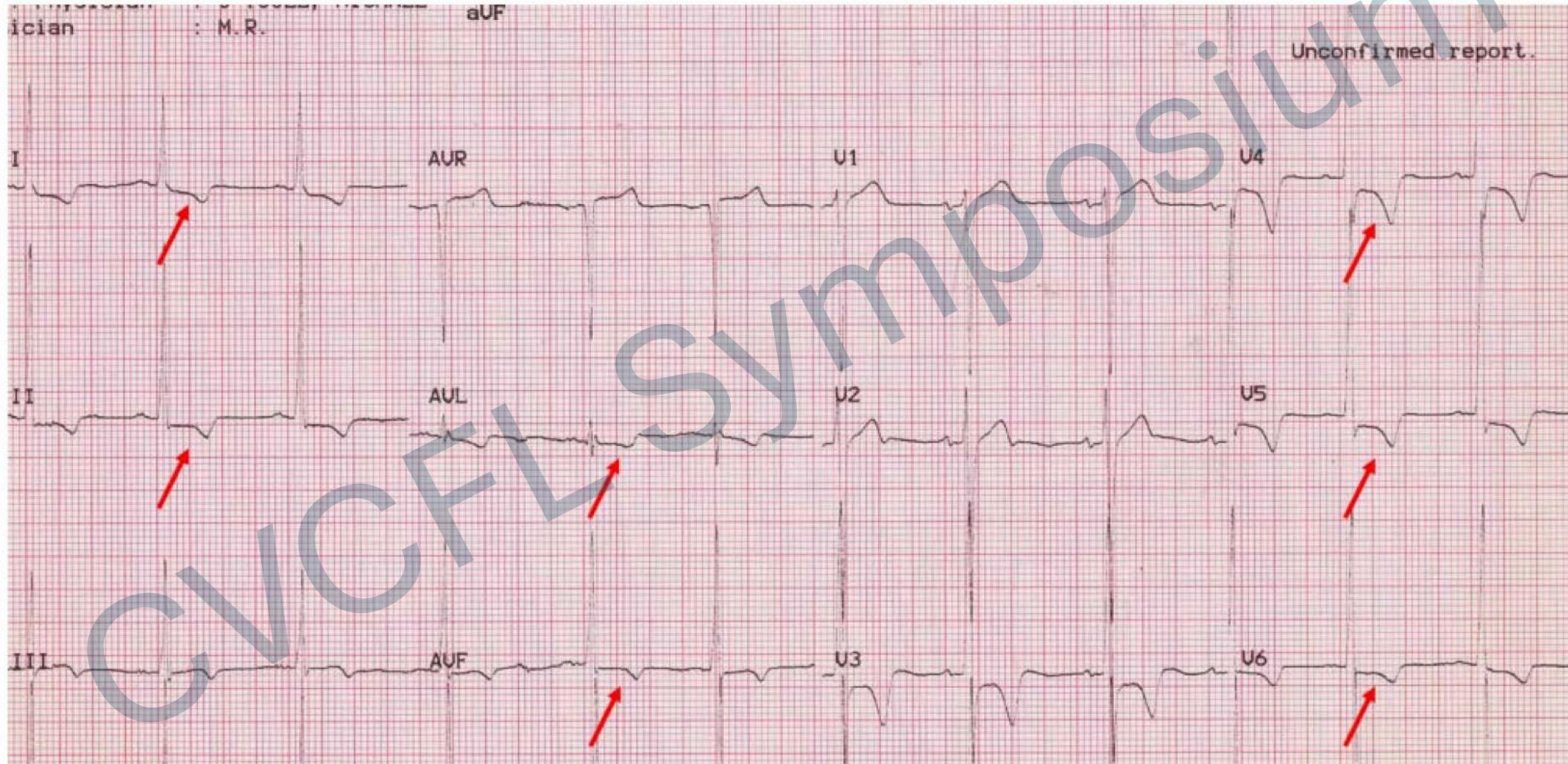
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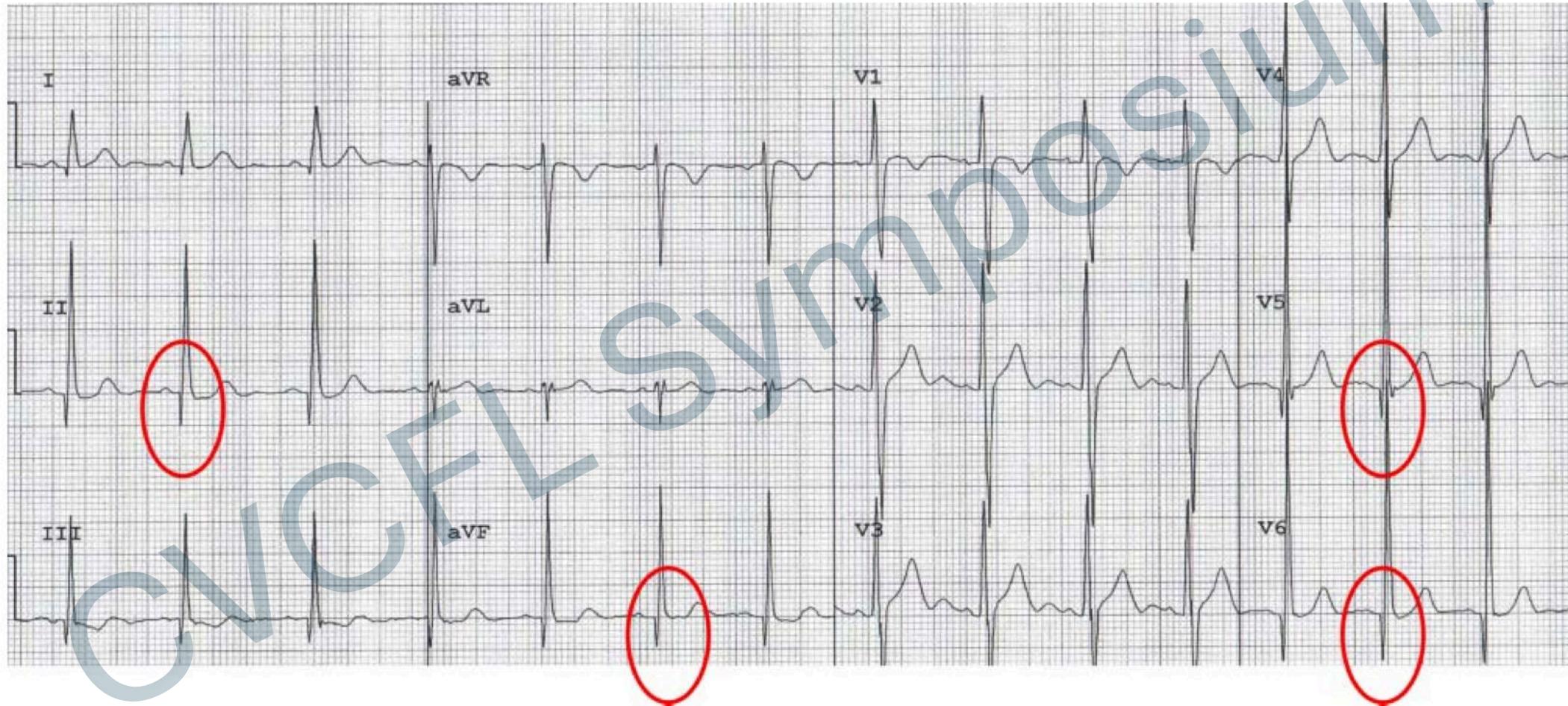
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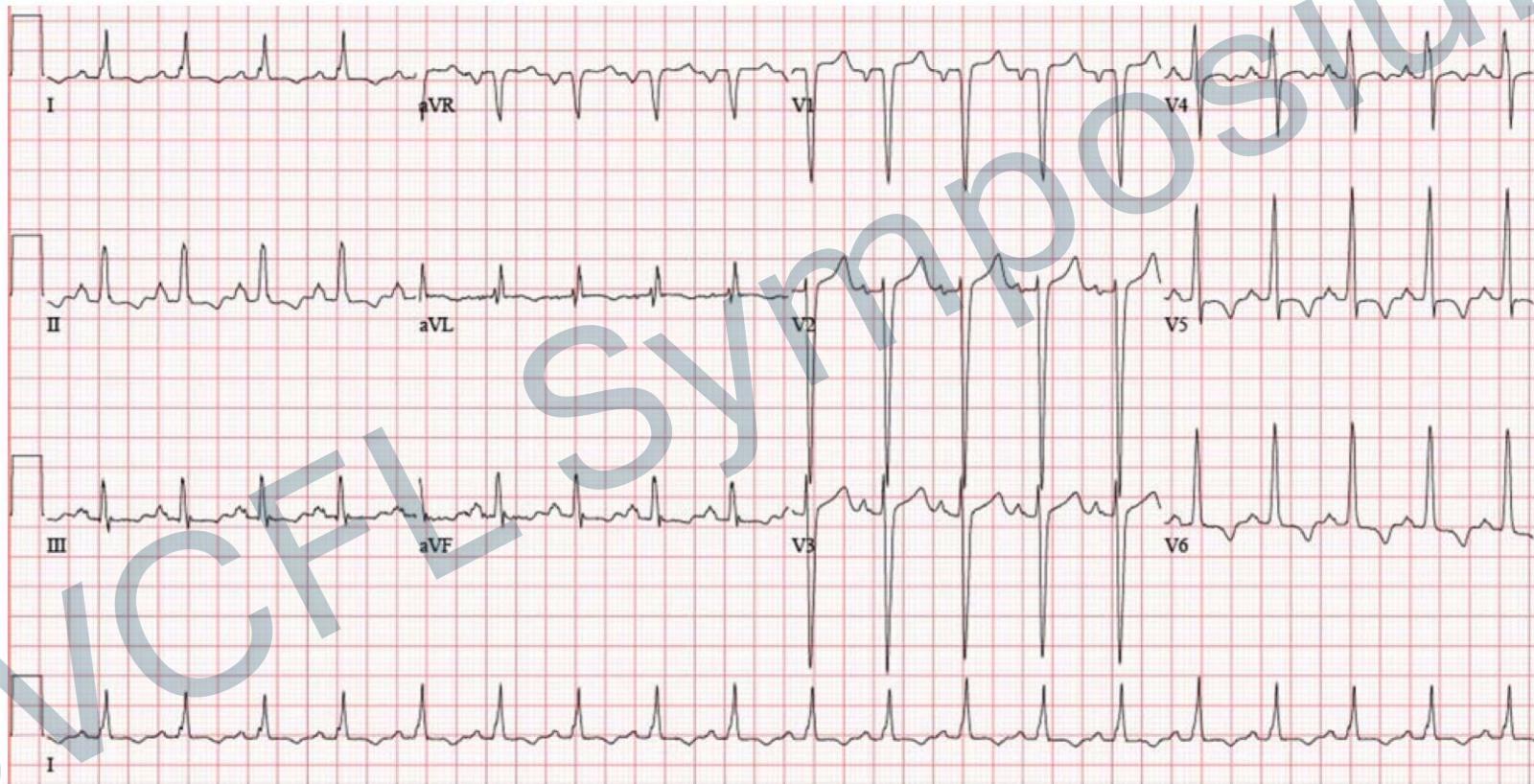
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ECG OF DEATH



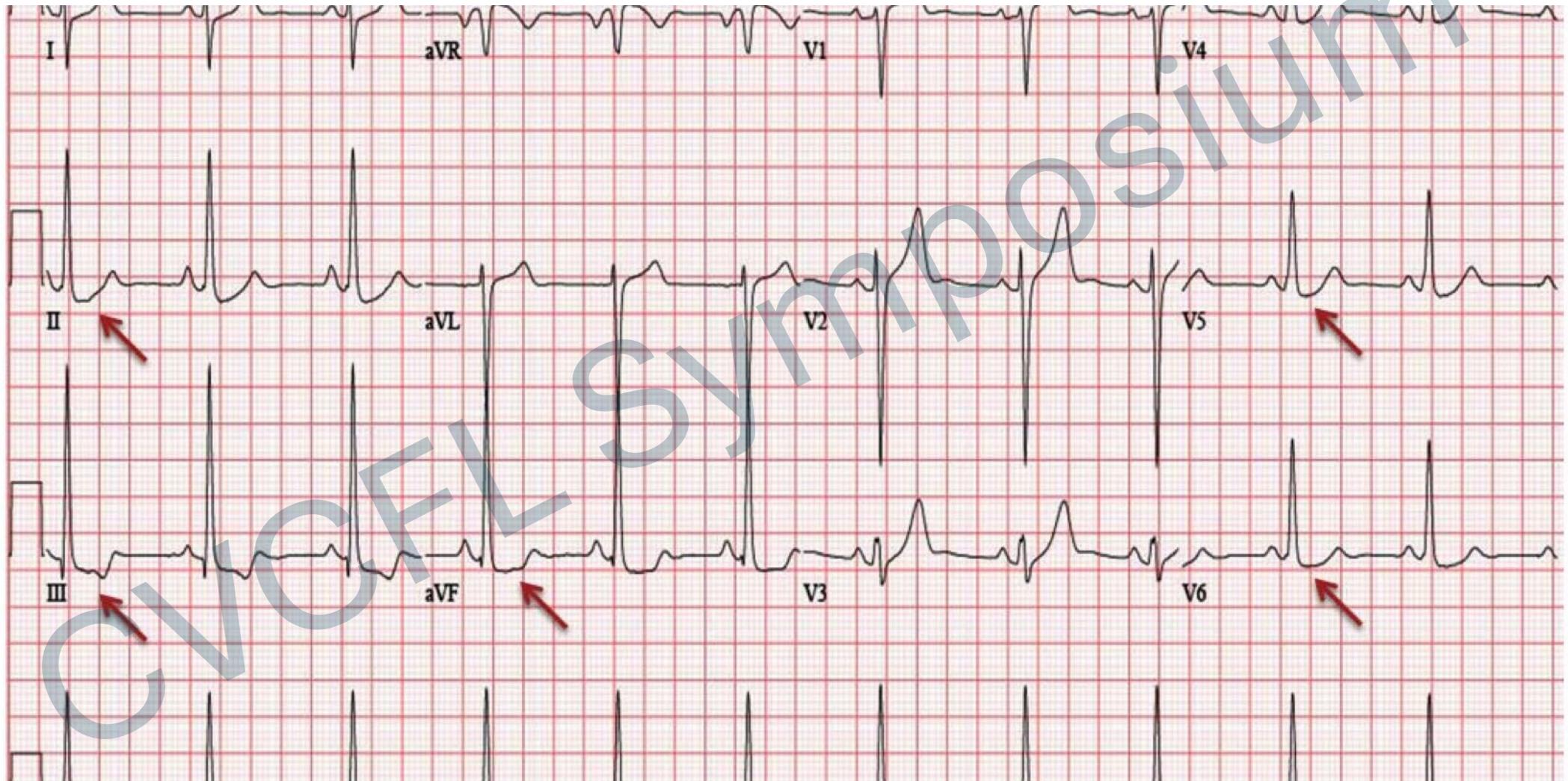
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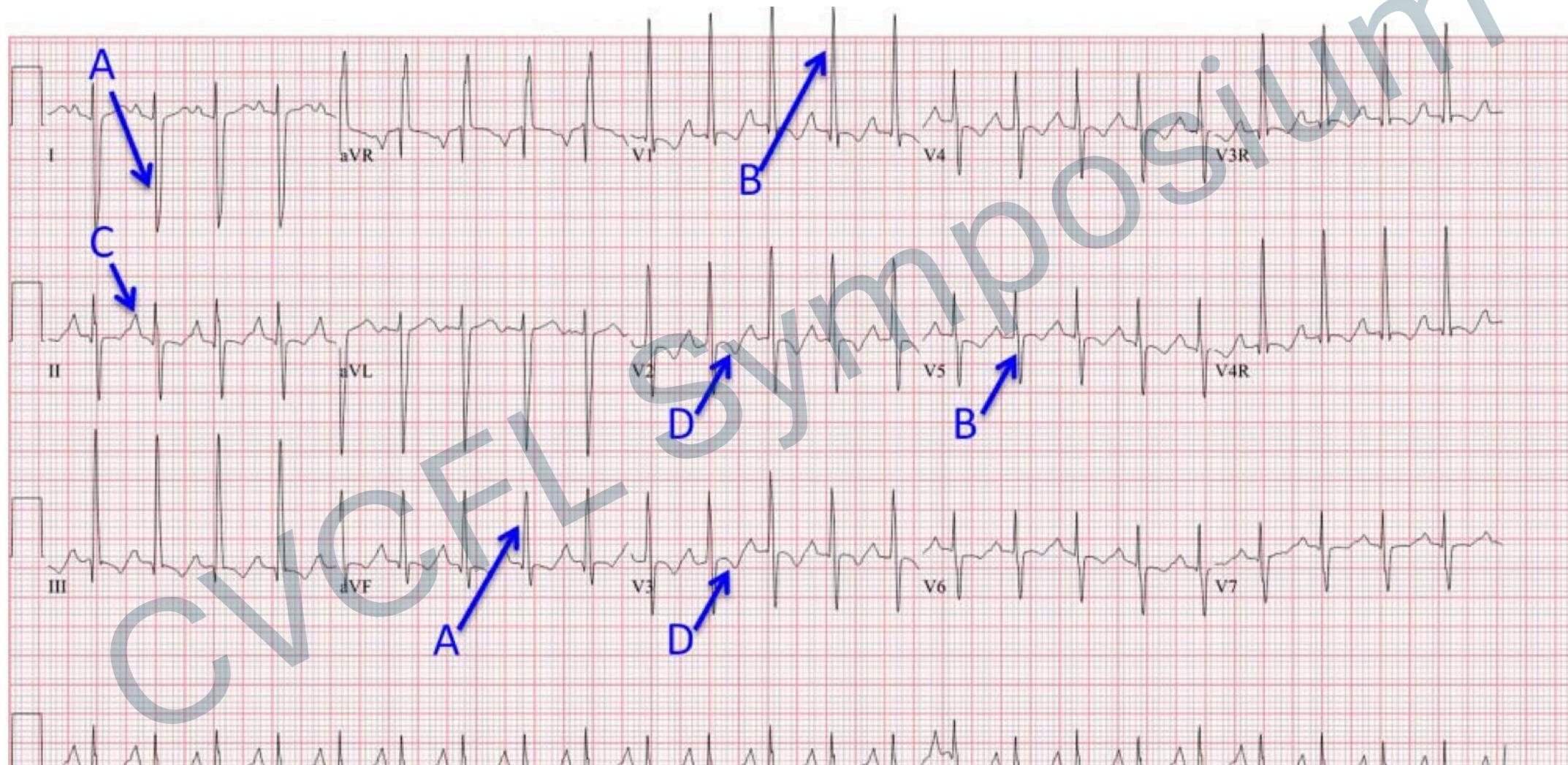
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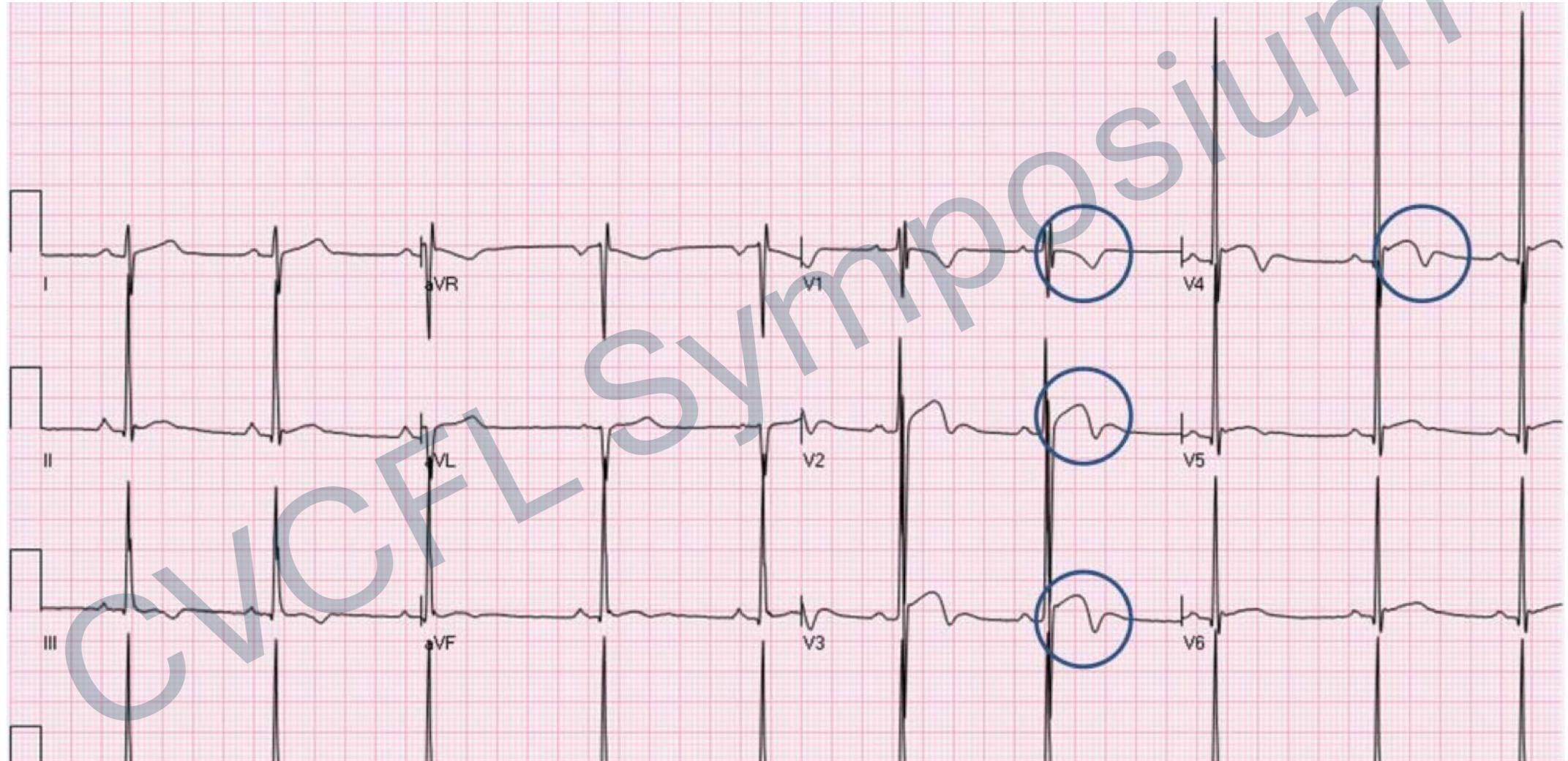
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Case 1a

- A 46-year-old woman w fibromyalgia presents to the clinic reporting an episode of syncope. She had been standing at an outdoor concert on a hot evening when started to feel lightheadedness and diaphoretic. She slumped to the ground and recovered a few months later, with no evidence of incontinence or confusion. The last episode happened while waiting in a long line at the DMV. No other symptoms. Her only medication is duloxetine. PE: unremarkable

ECG: NSR

Which one of the following is the most appropriate treatment for her?

- Prescribing recumbent exercise
- Fludrocortisone
- Ivabradine (Corlanor)
- Teaching her Valsalva maneuver
- Teaching her hand-grip maneuver

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THANK YOU!



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