



# RESTART A HEART

Dr Yash Dixit {Resident in EM}  
under the guidance of Dr Varsha S. Shinde {Prof & HOD EM}

26/M brought to ED in unresponsive state at 8:20 am.

C/O → chest pain since 6:30 am.



# INITIAL ASSESMENT

- Carotid and BP not recordable
- Monitor showed rhythm asystole

# COURSE IN ED

- CPR started according to ACLS protocol



{Airway protected via intubation}

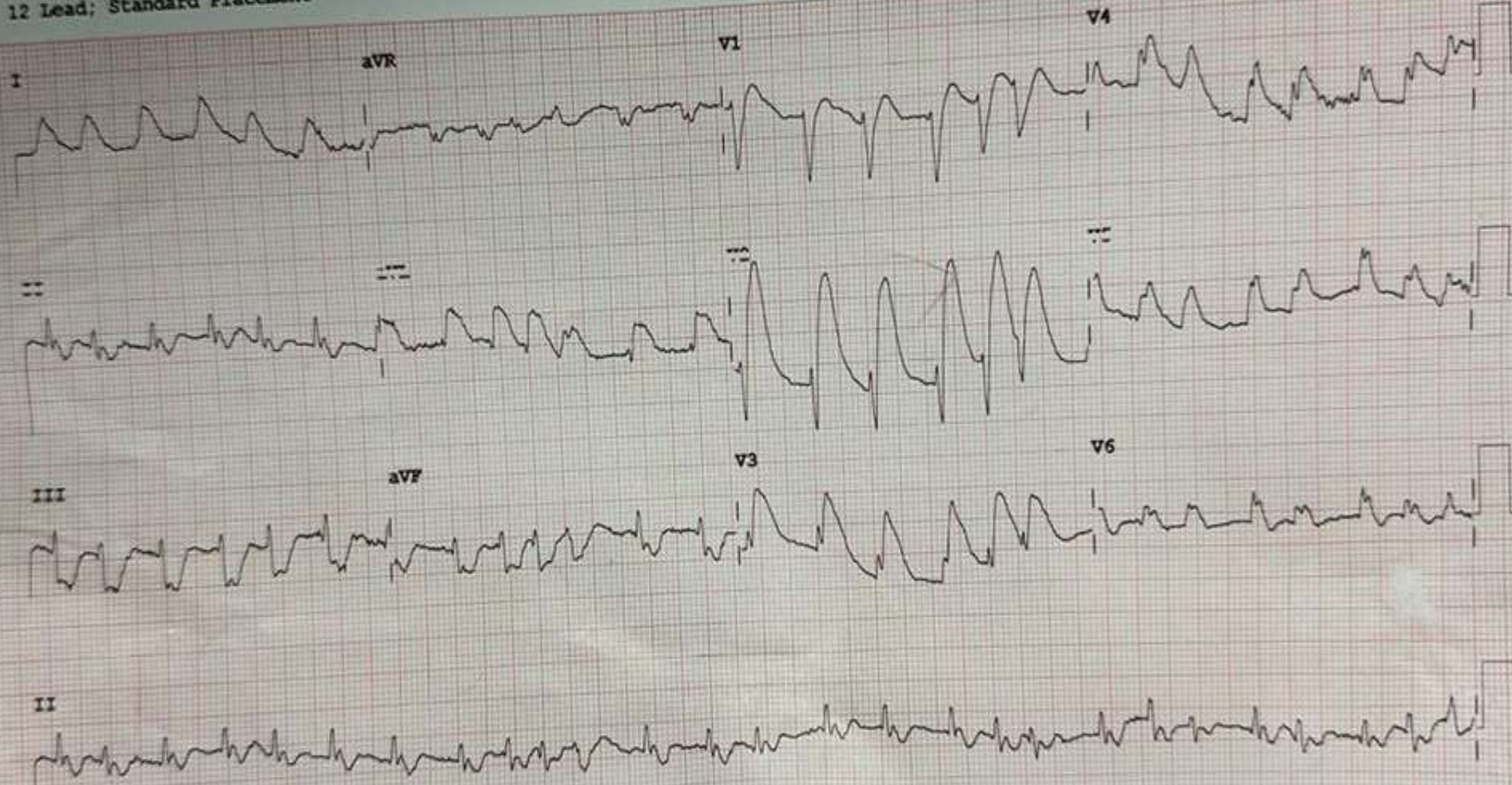
- CPR continued for 35 mins



2 episodes of VFib and defibrillation done

- ROSC achieved

12 Lead; Standard Placement



Device:

Speed: 25 mm/sec

Limb: 10 mm/mV

Chest: 10.0 mm/mV

F 60~ 0.15-100 Hz

PH100B CL

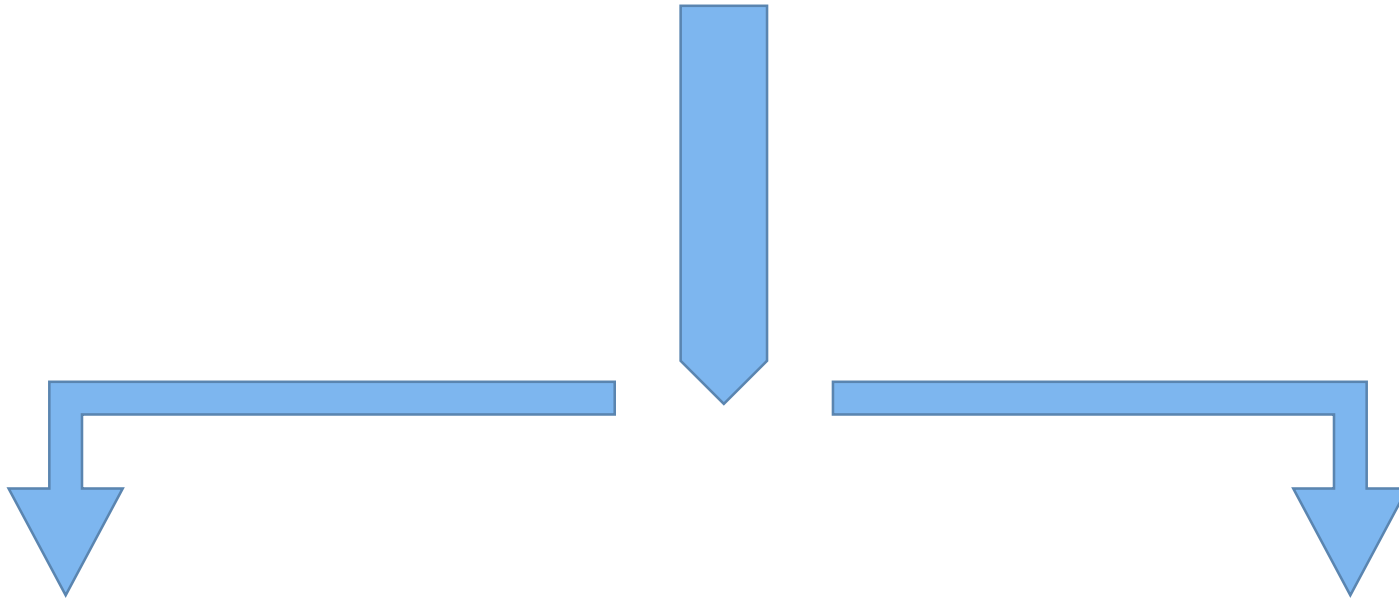
P?

PHILIPS

REORDER M22429

**CARDIAC ARREST.... again!**

# THE DECISION



Continue conventional CPR

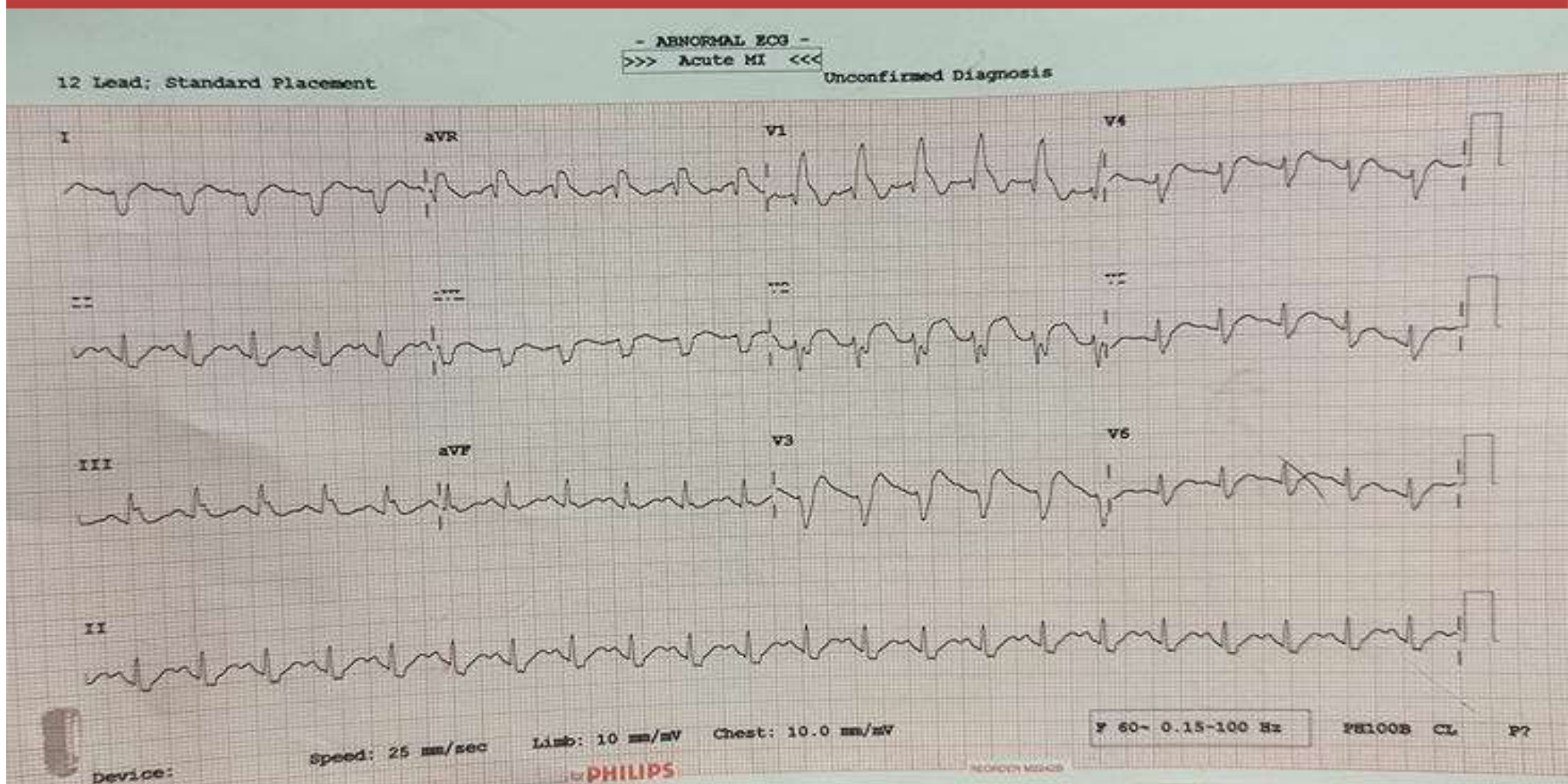
Think **OUT** of the box?

- Patient was thrombolysed wth INJ TENECTEPLASE 35mg iv stat





# POST THROMBOLYSIS ECG



# Course in ED

- Shifted to EM ICU
- Vasopressor down titrated
- GCS improved E4VtM6

# The Follow up

- Cardiac consult sought.



# DISCUSSION

- Thrombolysis has proved to be an effective treatment strategy for massive pulmonary thromboembolism and acute myocardial infarction.
- Good neurologic outcome after administration of thrombolytic agents during CPR has been previously reported.
- Hemodynamically unstable patient/Impending cardiac arrest in PE is an indication for thrombolysis.

# DISCUSSION

- PCI is the most effective treatment for STEMI, particularly in patients with contraindications to thrombolysis. Thrombolysis within 3 hours of STEMI onset is equivalent to emergency PCI, and current guidelines recommend thrombolysis within 6 hours without PCI, but there are no current guidelines for thrombolysis DURING cardiopulmonary resuscitation after cardiac arrest.
- Multiple studies on postresuscitation thrombolytic therapy can effectively improve patient prognosis.



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## American Journal of Emergency Medicine

journal homepage: [www.elsevier.com/locate/ajem](http://www.elsevier.com/locate/ajem)



### Systemic thrombolysis for refractory cardiac arrest due to presumed myocardial infarction

Joseph A. Hamera, MD<sup>a,b</sup>, Noah B. Bryant, MD<sup>c,d</sup>, Mark S. Shievitz, MD<sup>e</sup>, David A. Berger, MD<sup>a,c,\*</sup>



## THE LANCET



Volume 357, Issue 9268, 19 May 2001, Pages 1583-1585

Articles

### Efficacy and safety of thrombolytic therapy after initially unsuccessful cardiopulmonary resuscitation: a prospective clinical trial

Bernd W Böttiger MD<sup>a</sup>, Christoph Bode MD<sup>b,c</sup>, Sabine Kern MD<sup>a</sup>, André Gries MD<sup>a</sup>, René Gust MD<sup>a</sup>, Rolf Glätzer MD<sup>a</sup>, Harald Bauer MD<sup>a</sup>, Johann Motsch MD<sup>a</sup>, Eike Martin MD<sup>a</sup>



ELSEVIER

## Resuscitation

Volume 61, Issue 3, June 2004, Pages 309-313



### A pilot randomised trial of thrombolysis in cardiac arrest (The TICA trial)

Daniel M Fatovich, Geoffrey J Dobb, Richard A Clugston

Randomized Controlled Trial > *N Engl J Med.* 2008 Dec 18;359(25):2651-62.

doi: 10.1056/NEJMoa070570.

### Thrombolysis during resuscitation for out-of-hospital cardiac arrest

Bernd W Böttiger<sup>1</sup>, Hans-Richard Arntz, Douglas A Chamberlain, Erich Bluhmki, Ann Belmans, Thierry Danays, Pierre A Carli, Jennifer A Adgey, Christoph Bode, Volker Wenzel; TROICA Trial Investigators; European Resuscitation Council Study Group

# AMI IN YOUNG

- Sparse data are available describing recent trends in the magnitude, incidence of morbidity, clinical features, treatment practices, and outcomes of comparatively young adults hospitalized with AMI.
- The lifestyles of young people, characterized by smoking, alcoholism, fast pace, high work stress, overeating, and overwork, likely cause disturbances in the internal environment disorder, such as fat metabolic disorder, platelet aggregation and coronary atherosclerosis, that increase the incidence of AMI



## Acute Myocardial Infarction in Young Individuals

Rajiv Gulati, MD, PhD; Atta Behfar, MD, PhD; Jagat Narula, MD, PhD;  
Ardaas Kanwar; Amir Lerman, MD; Leslie Cooper, MD;  
and Mandeep Singh, MD, MPH

American Journal of Emergency Medicine 46 (2021) 673



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Emergency Medicine

Thrombolysis during CPR



References

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# DISCUSSION

- In conclusion, intra-CPR thrombolysis can play a crucial role in reviving the heart and improving outcomes for patients who have suffered cardiac arrest. However, it should be used with caution and only in appropriate cases. More research is needed to determine the optimal use of thrombolysis in post-CPR care.



# TAKE HOME MESSAGE

- Consider iv thrombolysis in proven STEMI patients undergoing CPR.
- Systemic thrombolysis as a salvage therapy for refractory cardiac arrest despite maximal conventional resuscitative efforts.

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