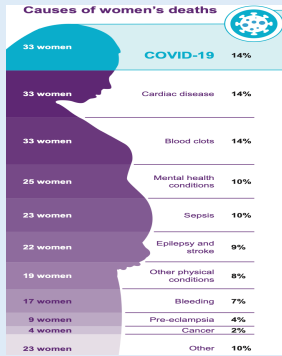


Systemic Thrombolysis for Treatment of Massive Pulmonary Embolism Following a Postpartum Haemorrhage

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Introduction

- VTE is one of the leading causes of direct maternal death
- Occurs in 1/1,000 pregnancies
- 20x risk in puerperium
- Increased use of antenatal LMWH following improved antenatal risk stratification

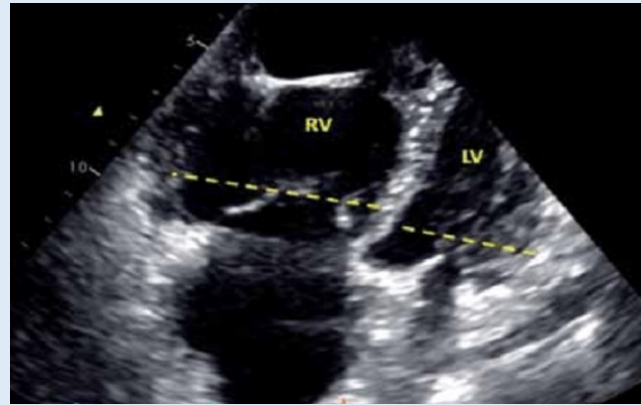


MBRRACE-UK, Maternal deaths 2019-21, Oct 2023

What happened?

- 36-year-old para 2, 2 previous NVD
- Admitted 33⁺⁴ weeks with severe pre-eclampsia
- Deterioration Day 11 – uncontrolled HTN despite triple antihypertensive therapy, significant non-dependent peripheral and pulmonary oedema
- Precipitous labour and delivery
- Massive PPH > 3 litres
- PEA cardiac arrest
- No sustained ROSC despite correction of blood volume

- Bedside ECHO showed dilated right ventricle and ECG: RBBB, Right axis deviation
- Decision to perform thrombolysis for presumed PE
- Transferred to ICU, rapid recovery next 24 hours
- CTPA confirmed PE



What do we know?

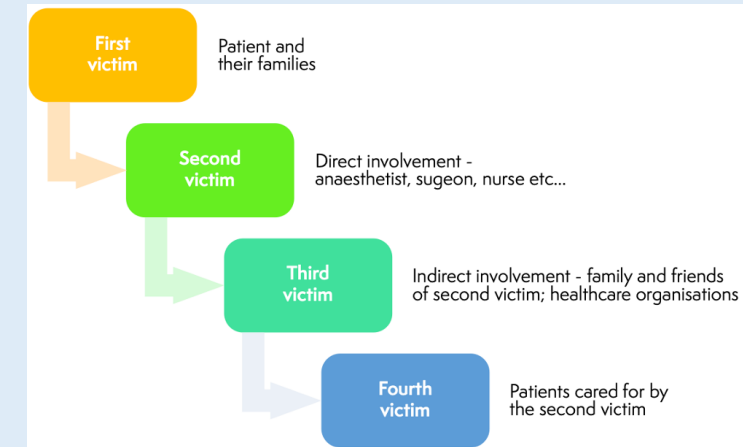
- Incidence of cardiac arrest in obstetric population 1 in 12,700
- PET increases the risk of VTE by 5 fold
- Risk is multifactorial
- Decision for administering thrombolysis requires senior MDT input
- Unfractionated Heparin Vs Thrombolysis
 - Meta-analysis; thrombolytic therapy more effective recurrent PE or death
 - Anticoagulant alone will not reduce obstruction in circulation

Systematic review of thrombolysis in pregnancy:

Complication	Number affected (n = 141)
Death	4 (2.8%)
Major Bleeding	12 (8.5%)
Mild/moderate Bleeding	13 (9.2%)
Fetal death	2 (1.4%)

Summary

- Thrombolysis should not be withheld in cases of life-threatening PE but requires multidisciplinary input
- Thrombolysis should not be withheld during pregnancy when indicated
- Case highlights the need to further develop guidance
- The psychological impact on patients and staff cannot be underestimated and a robust debriefing process is essential



NAP 7:perioperative cardiac arrest, Nov 2023

References

MBRRACE-UK Saving Lives Improving Mothers' Care - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2019-21
 At the Heart of the Matter. Report and findings of the 7th National Audit Project of the Royal College of Anaesthetists examining Perioperative Cardiac Arrest. Soar J, Cook TM editors. Royal College of Anaesthetists: 2023. ISBN 978-1-900936-35-4
 Sousa Gomes M, Guimarães M, Montenegro N. Thrombolysis in pregnancy: a literature review. J Matern Fetal Neonatal Med. 2019 Jul;32(14):2418-2428. doi: 10.1080/14767058.2018.1434141. Epub 2018 Feb 11. PMID: 29378443.