

Breathless Patient, Suspect Acute Pulmonary Embolism "Go Get An Echo"

Protagonist: Aye! Echo Has the Answers
11:15 – 11:25

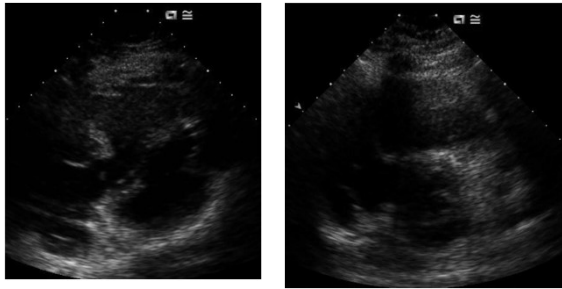


So you think you are having a bad day.....



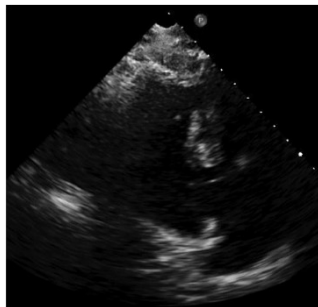


Urgent bedside TTE



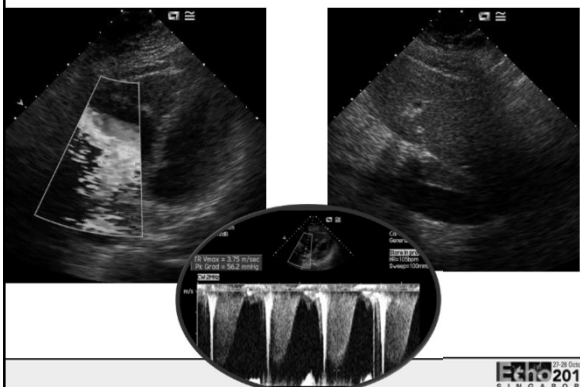
2018
SINGAPORE

Urgent Transthoracic Echocardiogram

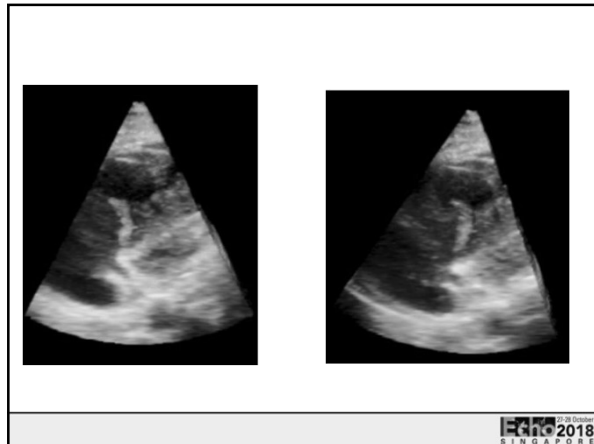


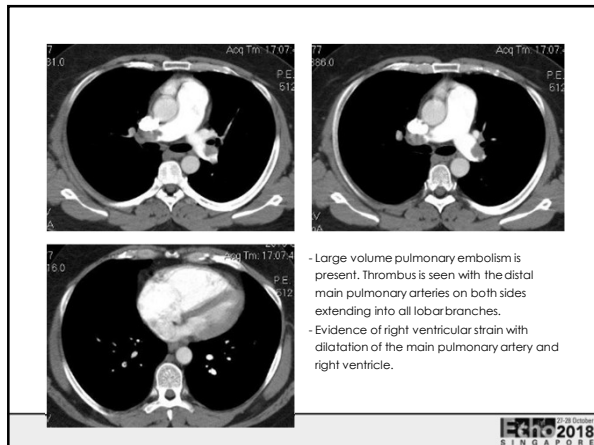
2018
SINGAPORE

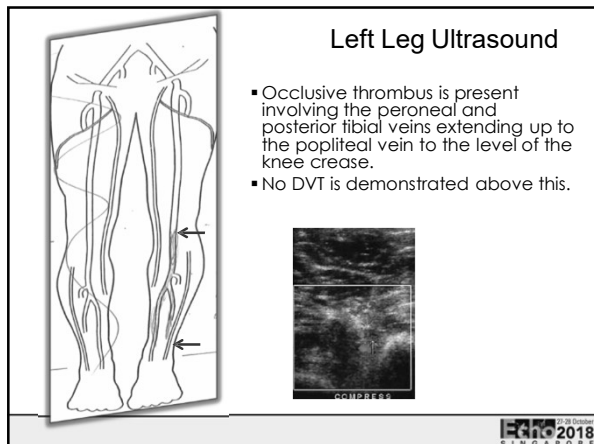
Urgent Transthoracic Echocardiogram



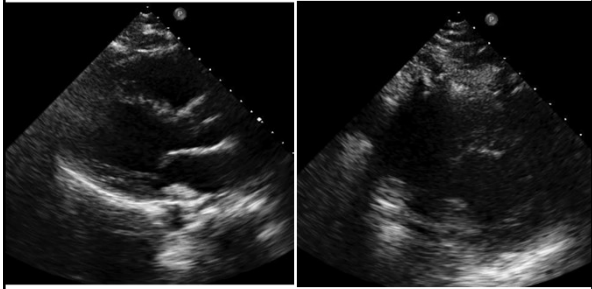
2018
SINGAPORE





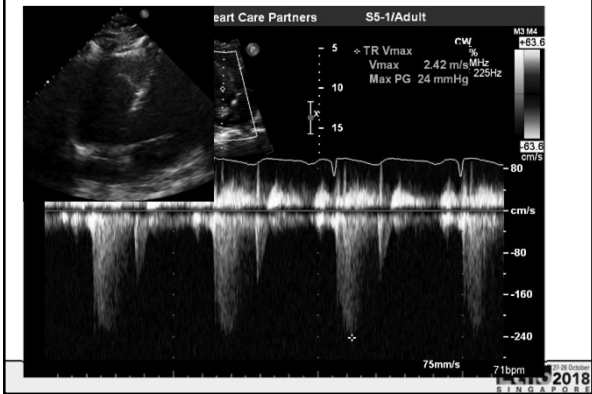


Post Thrombolysis



2018
S I N G A P O R E

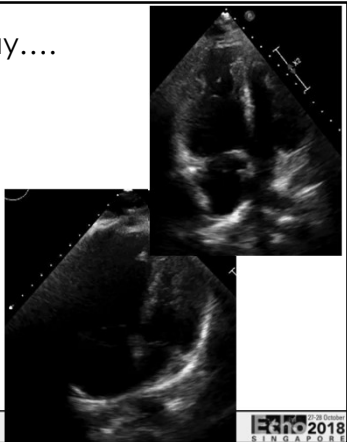
Post Thrombolysis



2018
S I N G A P O R E

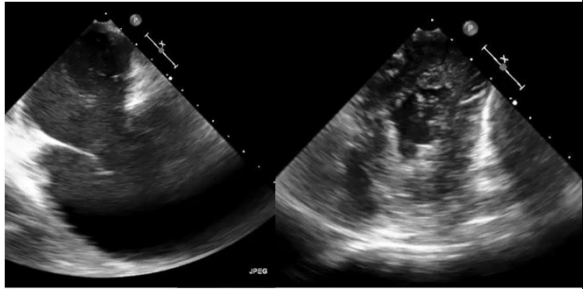
Really bad day....

- D2 post laminectomy, 35yo woman, OCP smoker
- Hemodynamic collapse



2018
S I N G A P O R E

Really really bad day....

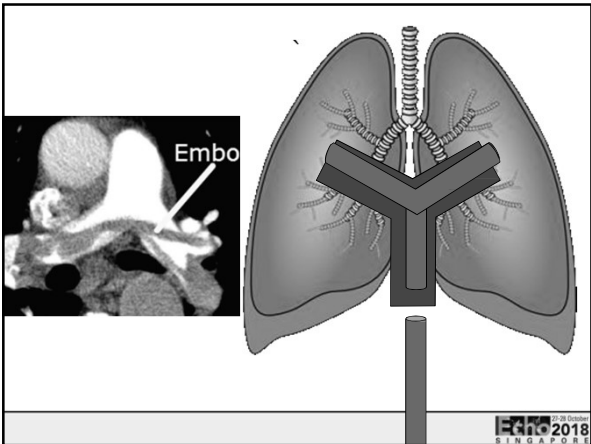


23 October
EQIG 2018
SINGAPORE

So you think you are having a bad day.....



23 October
EQIG 2018
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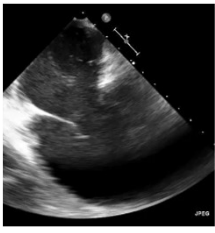


23 October
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PULMONARY EMBOLISM

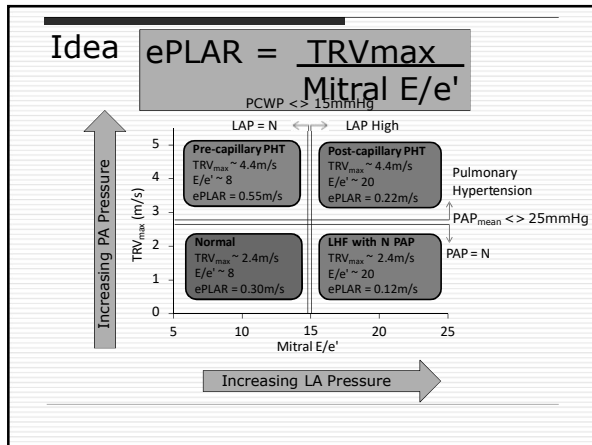
Echocardiographic Pattern of Acute Pulmonary Embolism: Analysis of 511 Consecutive Patients

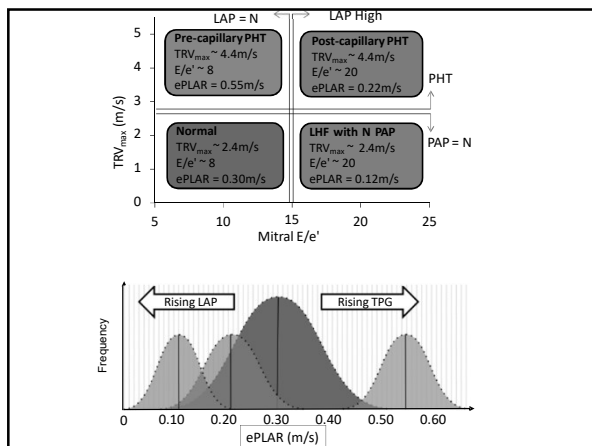
Katarzyna Esmiak, MD, PhD, Barbara Lichodajewska, MD, PhD, Jolita Górecka, MD, Olga Dabrowska-Dziack, MD, Olga Zdanowicz, MD, Maria Kosciuszka, MD, Maciej Jaworski, MD, PhD, Michal Czerwikowski, MD, PhD, Piotr Pakozinski, MD, PhD, Karolina Gonska, MD, Marcin Krupis, MD, Marcin Koc, MD, and Piotr Pruszkowski, MD, PhD, Warsaw, Poland



Conclusions: Transthoracic echocardiography showed no significant abnormalities suggestive of PE in 71% of patients with PE, while in approximately 10%, transthoracic echocardiography revealed incidental findings. The coexistence of an enlarged right atrium together with the McConnell sign together with the 6500 sign seems to be the most useful echocardiographic criterion for RVd. (J Am Soc Echocardiogr 2016;29:907-11).

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Pulmonary embolus

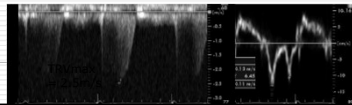
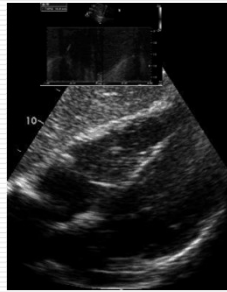
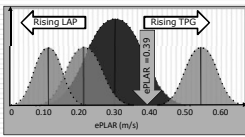
- Abrupt increase in TPG
- Often no increase in RVSP
- Some sub-massive PE cases have
 - Dilated RV, reduced function
 - Many have normal RV function and normal RVSP
- ePLAR may detect increased TPG with normal TR/RVSP



PE with normal TR

$$ePLAR = \frac{TRV_{max}}{Mitral E/e'}$$

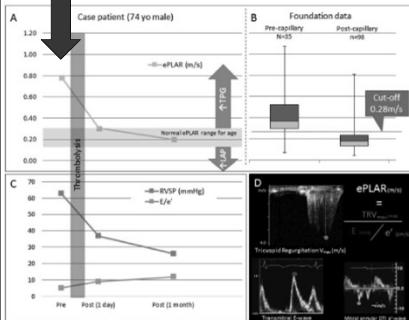
$$= 2.5 \div 6.4 = 0.39 \text{ m/s}$$



PE Lysis

Dramatic Normalization of the Echocardiograph Pulmonary-to-Left Atrial Ratio with Thrombolysis in a Case of Life-Threatening Submassive Pulmonary Emboli

Isabel G. Scalia, BSc, Andrei Z. Ribu, MBBS, FRACP, Agatha Kwon, BSc, Karolina Nienkjaer, MBBS, FRANZCR, and Gregory M. Scalia, MBBS, MMedSci, FRACP, FCSANZ, FACU, FASE, Brisbane, Australia



Echo in PE

- PE is a clinical syndrome of acute increase in trans-pulmonary gradient
- CTPA is basically a binary test – clot or not!
- Echo
 - Degree of hemodynamic distress - ePLAR
 - State of RV
 - Portable and acute
- Do I need to thrombolyse?
- Do I need to operate?
- What do I need to do to save this life.....