Assessment of the Right Ventricle

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— Dr. William Harvey (1628)
De Motu Cordis

“Those therefore which I hear denying that blood, yea the whole mass of blood, may pass through the substance of the lungs, as well as the nutritive juice through the liver, as if it were impossible and no ways to be believed—it is thought that those kind of men [. . .], they are afraid.”

Case

• A 56 year-old women was intubated in the ER, an arterial and a central line was placed, and she received a 1 liter fluid bolus, prior to transfer to your ICU

• She had an ablation procedure for Afib 4 days ago at an OSH

• Increasing SOB and drowsiness over the last 24 hours

The Ability of Anesthesia Providers to Visually Estimate Systolic Pressure Variability Using the “Eyeball” Technique

Robert H. Thistle, MD, Douglas A. Cotéhoun, MB CHB, MSc, Franziska E. Blum, MD, and Marcel E. Durieux, MD, PhD

Dynamic changes in arterial compliance: Special Feature

FEF clip courtesy of Kathie DeChalk, MD
Evaluation of RV function

- Pulmonary artery catheter
- Echocardiography
- Surrogates of end-organ perfusion

The Right Ventricle

(...) it is crescent shaped...

From: Miller’s Anesthesia, 6th edition

Echocardiographic RV evaluation

- Quantitative echocardiography is focused on evaluating the LV
- More techniques to evaluate RV function have been developed (TAPSE, Tei Index, RV strain)
Tricuspid Annular Plane Systolic Excursion (TAPSE)

Summary of important TTE views

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<th>RV metrics</th>
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| Qualitative systolic function | - Parasternal short axis of basal RV (RV inflow/outflow)  
- Parasternal short axis of basal RV (at pap muscle level)  
- Parasternal long axis  
- Apical 4C view | Grade as normal, mild, moderate, or severe systolic dysfunction |
| TAPSE | Apical 4C view | Using M-mode through lateral annulus |

Thank you!