

DR. TOD ENGELHARDT, MD, FACS
East Jefferson Hospital, Metairie, LA

High-Risk Submassive Pulmonary Embolism Resolved in 36-Hour Hospital Stay



Patient History

37-year old male, on active military duty with no prior medical history, was transferred from the emergency room at a local hospital to the East Jefferson cath lab with a diagnosis of acute submassive pulmonary embolism.

- Diagnosed DVT of right lower extremity involving right common femoral vein, popliteal vein, and tibial veins, but no iliac thrombus seen on ultrasound.
- CT scan from ER showed saddle pulmonary embolism with extensive bilateral involvement, enlarged right ventricle—RV/LV ratio of 2.2.
- Elevated troponin, tachycardic at 110 bpm, normotensive.
- Pulmonary artery pressures 53/32 mmHg; mean pressure 41 mmHg.

Treatment

- 18 cm EKOS® catheter placed via right common femoral vein into left lower lobar branch, draped across pulmonary valve into right ventricular outflow tract; 12 cm EKOS® catheter placed similarly into right lower lobar branch. Both catheters 106 cm working length.
- EKOS® Acoustic Pulse Thrombolysis™ treatment with tPA @ 1 mg/hour/ catheter for 12 hours for total of 24 mg tPA.
- Spent 1/2 day in ICU; discharged at 36 hours.

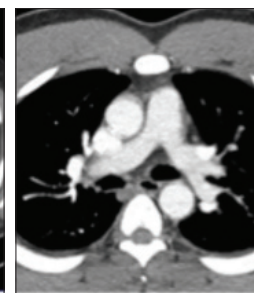
Results

- CT scan only 2 weeks after termination of treatment showed complete resolution of embolism in main and left pulmonary arteries and reduction in RV/LV ratio to 0.8.
- Pulmonary artery pressures 8 hours post-infusion significantly reduced to 18/8 mmHg; mean pressure 12 mmHg.
- Transthoracic echocardiogram 3 hours after termination of therapy showed completely normal function and size.

Pre-treatment



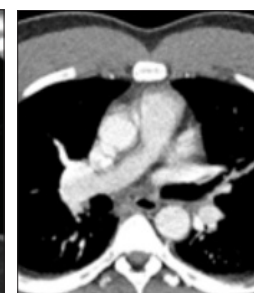
Saddle PE

Post-treatment
(2 weeks)

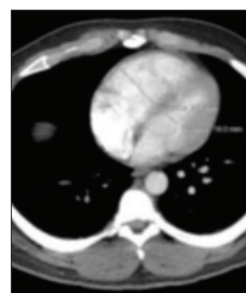
Resolution of saddle PE



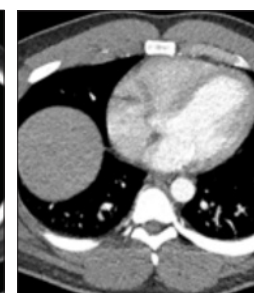
Bilateral involvement



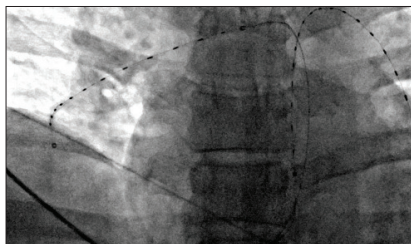
Resolution of lower lobe thrombi



RV/LV ratio 2.2



RV/LV ratio 0.8



EKOS® Catheter Placement

“EKOS® Acoustic Pulse Thrombolysis™ intervention certainly prevented this young man’s death from PE and will also prevent other long-term sequelae, such as chronic thromboembolic pulmonary hypertension, from impacting what should be a long, full, and active life.”

- Tod Engelhardt, MD



FDA CLEARED INDICATIONS: The EkoSonic® Endovascular System is indicated for the ultrasound facilitated, controlled and selective infusion of physician-specified fluids, including thrombolytics, into the vasculature for the treatment of pulmonary embolism; the controlled and selective infusion of physician-specified fluids, including thrombolytics, into the peripheral vasculature; and the infusion of solutions into the pulmonary arteries. Instructions for Use, including warnings, precautions, potential complications, and contraindications can be found at www.ekoscorp.com. Caution: Federal (USA) law restricts these devices to sale by or on the order of a physician. EKOS® and EkoSonic® are registered trademarks of EKOS Corporation, a BTG International group company. Acoustic Pulse Thrombolysis is a trademark of EKOS Corporation. BTG and the BTG roundel logo are registered trademarks of BTG International Ltd. © 2015 EKOS Corporation • US-EKO-2015-0171(1)

EKOS CORPORATION
11911 N Creek Pkwy S.
Bothell, WA 98011