

# Clot in Transit: Early Intervention with Early Recovery

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## Abstract

48-year-old female presented with dyspnea and fatigue in June 2020. CT imaging found pulmonary embolus and a heparin drip was initiated. She later developed chest pain which led to an echocardiogram. This imaging noted biatrial thrombus extending through mitral and tricuspid valve, as well as through a patent foramen ovale (PFO) (Fig. 1, 2). She underwent emergent sternotomy, left and right atrial embolectomy, left and right pulmonary embolectomy, and atrial septal defect closure (Fig. 3). She progressed well post op and was discharged on postoperative day 7 on therapeutic anticoagulation. Remains in good condition on follow up on long term follow up.

## Title Page

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## Abstract

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## Text

Pulmonary embolism is a blockage of a pulmonary artery. This condition has both high morbidity and mortality<sup>1</sup>. A rare form of this embolism is referred to as a ‘clot in transit’, which is a thrombus that extends from the right atrium through the tricuspid valve. Estimated mortality from ‘clot in transit’ is estimated at approximately 45%<sup>1</sup>. Increasingly rare is the ‘impending paradoxical embolism’ (IPDE), which is defined as the thrombus extending across an atrial septal defect<sup>2</sup>. If a clot in transit is also traversing a PFO, studies have shown decreased mortality with surgical intervention when the patient is hemodynamically stable, but thrombolytic therapy if unstable, although limited research on mortality and outcome with medical management<sup>3</sup>. This study received a waiver from the IRB at our institution.

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## Figures Legends

Figure 1- Echocardiogram noting mobile clot in the right atrium with PFO.

Figure 2- Echocardiogram noting mobile clot extending through both tricuspid and mitral valve.

Figure 3- Intraoperative photographs, A) demonstrating clot visualized within the right atrium. B) Clot being removed with distal portion remaining within the PFO. C) Clot in its entirety after removal.

## Figures

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Figure 1- Echocardiogram noting mobile clot in the right atrium with PFO.

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Figure 2- Echocardiogram noting mobile clot extending through both tricuspid and mitral valve.

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Figure 3- Intraoperative photographs, A) demonstrating thrombus visualized within the right atrium. B) Clot being removed with distal portion remaining within the PFO. C) Clot in its entirety after removal.