A 27-year-old man with a history of paroxysmal atrial flutter treated with CTI ablation two years prior presents with complaints of exertional dyspnea for a month. He denied palpitations and had been exercising three weeks since the time of his ablation without incident. His awareness of shortness of breath and exertional fatigue come on with limited effort but are without associated chest pain or lightheadedness. He denies any sick contacts, recent travel or toxic environmental exposures. He had been on warfarin, flecainide and verapamil around the time of his ablation, but was not taking any medications at the time of presentation. He is 6 feet tall, 192 lbs with a regular pulse at 68 beats per minute. Blood pressure 122/77 mm Hg, oxygen saturation is 100% on room air. Cardiovascular exam is regular. He has no audible rub, murmur, or gallop. His point of maximal impulse is of normal size and is non-displaced. His lungs are clear. Abdomen and extremities are benign.

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Data
- Transesophageal echocardiogram showed a mobile mass from the right atrial free wall (Figure 1A)
- Differential diagnosis included tumor (atrial myxoma, papillary fibroelastoma, metastasis), vegetation, thrombus
- Transesophageal echocardiogram showed a filling defect adjacent to the septal tricuspid leaflet (Figure 1C and 1D)
- Vegetation, thrombus

Transthoracic echocardiogram prior to his ablation showed no mass (Figure 1B)
- Cardiac MRI showed a pedunculated mobile mass that enhanced with gadolinium attached to the septal leaflet of the tricuspid valve (Figure 2A)
- Differential diagnosis included tumor (atrial myxoma, papillary fibroelastoma, metastasis), vegetation, thrombus
- Serial transthoracic echocardiograms over 4 months showed the mass to be stable
- Cardiac MRI showed a pedunculated mobile mass that enhanced with gadolinium attached to the septal leaflet of the tricuspid valve (Figure 2A)
- Transthoracic echocardiogram showed a pedunculated mass from the right atrial free wall
- Transthoracic echocardiogram showed a mobile mass attached to the right atrial free wall (Figure 1C and 1D)
- CT chest with contrast showed a filling defect adjacent to the septal tricuspid leaflet (Figure 2A)
- Transthoracic echocardiograms over 4 months showed the mass to be stable
- Continued to have intermittent exertional dyspnea and anxiety regarding the mass so he was referred to CT surgery
- Underwent successful surgical excision of the tricuspid valve mass and repair of the septal leaflet
- Final pathologic diagnosis was hemangioma (Figure 3)
- Sensed in follow up with no symptoms and no recurrence of mass on transthoracic echocardiograms

Discussion
- Radiofrequency (RF) ablation targets an area between the tricuspid annulus and the IVC referred to as the cavotricuspid isthmus (CTI)
- RF ablation of the CTI is generally safe with a 90% success rate and a complication rate of 2.5-3.5%.
- Serious complications include heart block, pericardial effusion and tamponade, MI, PE and stroke
- Cardiac hemangiomas are rare benign vascular tumors, occur in all age groups and can occur anywhere in the heart
- Most patients are asymptomatic but can present with dyspnea, chest pain or palpitations
- They can also manifest with arrhythmias, neurologic symptoms, right ventricular outflow tract obstructions, congestive heart failure and coronary insufficiency
- Echocardiography is adequate for initial evaluation
- CT with contrast or MRI can demonstrate a hypervascularized structure
- Some cardiac hemangiomas involute, others stop growing and some continue to proliferate
- Complete resection is the treatment of choice with good long term surgical outcomes
- Hemangioma formation has been noted as a complication of RF ablation in other tissue beds
- Possible mechanism is RF ablation causes tissue necrosis which triggers inflammatory stimuli and angiogenesis
- As no mass was seen on the patient's echocardiogram prior to ablation the development of a hemangioma at the site of the ablation argues in favor of the RF ablation inducing its formation
- This represents an exceedingly rare complication of RF ablation of the CTI that practitioners should be aware of.