

Rare case of Atrial Septal Aneurysm presenting as Atrial fibrillation with Cardiogenic Shock

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INTRODUCTION

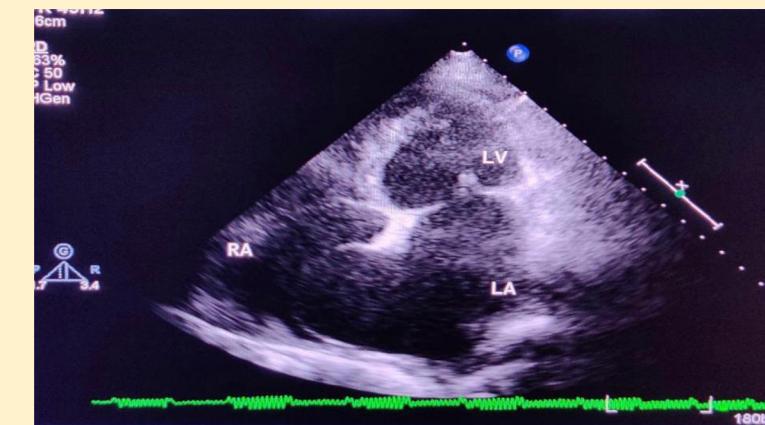
Atrial septal aneurysm is a rare cardiac abnormality, with a prevalence of 2-3% in adult population with female dominance. It is often associated with other heart defects, systemic embolism and atrial arrhythmias. We present a unique case of atrial septal aneurysm presenting as Atrial fibrillation with cardiogenic shock.

CASE PRESENTATION

A 45 year old female presented with shortness of breath, abdominal distension and vomiting. Patient was non diabetic, non hypertensive, non alcoholic and non smoker. On examination, patient was in distress, looking pale and was in shock with systolic blood pressure in 50's, pulse rate in 130/min with irregularly irregular pulse. Cardiovascular examination revealed apex beat in 5th intercostal space, S1 and S2 cannot be commented on because of the irregular rhythm with no added sounds or murmur. Respiratory examination revealed bilateral fine crepitations at the base of the lung. Abdominal and neurological examination was normal. Lab work showed abnormal liver and renal functions, with elevated bilirubin (3.5mg/dl), SGOT 490 U/L, SGPT 532 U/L, s. Lipase 350 IU, BUN 70 mg/dl and Se. Creatinine 3.8 mg/dl. ECG at presentation showed irregularly irregular rhythm. TTE revealed EF of 61% with moderate MS, mild MR and atrial septal aneurysm.

REFERENCES:

1. "Hidden Danger" a case report on interatrial septal aneurysm; Carolina Carcano, Jacobo Kirsch
2. An atrial septal aneurysm with an organized thrombus in an asymptomatic patient; Wang, Xinxin MD; Wang, Chunguo MD; Ma, Dehua MD; et al.
3. Echocardiographic Findings in Patients with Atrial Septal Aneurysm; Ramazan Atak, Mehmet Ileri, Selcuk Ozturk, Ahmet Korkmaz, and Ertan Yetkin



DISCUSSION

Atrial septal aneurysm is a rare congenital malformation of septum primum layer of interatrial septum. The diagnostic criteria of ASA proposed by Hanley based on the echo finding, is defined as a localized saccular dilatation or bulging of atrial septum, over the fossa ovalis region, for more than 15mm into either of the atrium. ASA is often associated with other cardiac abnormalities, like PFO, ASD and MVP. ASA can act as a site for thrombus formation and act as a potential source of systemic embolism due to its association with interatrial shunts like PFO and ASD and MVP. According to Yetkin et al valvular regurgitations and supraventricular arrhythmias are the most common accompanying pathologies with ASA. It is unclear what causes the arrhythmias. The pathogenesis of it may be due to the redundancy of the atrial septum or associated structural defects or the autonomic dysfunction.



CONCLUSION

The prevalence of atrial arrhythmias is around 25% in patients with ASA, with atrial fibrillation being the most common (Mugge). Echocardiography is the main modality for the diagnosis of ASA. Presence of ASA is an indication for long term antiplatelet or anticoagulant therapy or even surgery. Clinicians should be aware of this rare abnormality which is implicated in multiple other conditions and in our case presented with Atrial fibrillation with cardiogenic shock.

TAKE HOME POINTS

- Atrial septal aneurysm is a rare cardiac abnormality
- Supraventricular arrhythmias are the most common accompanying pathologies with ASA.
- Presence of ASA is an indication for long term antiplatelet or anticoagulant therapy or even surgery