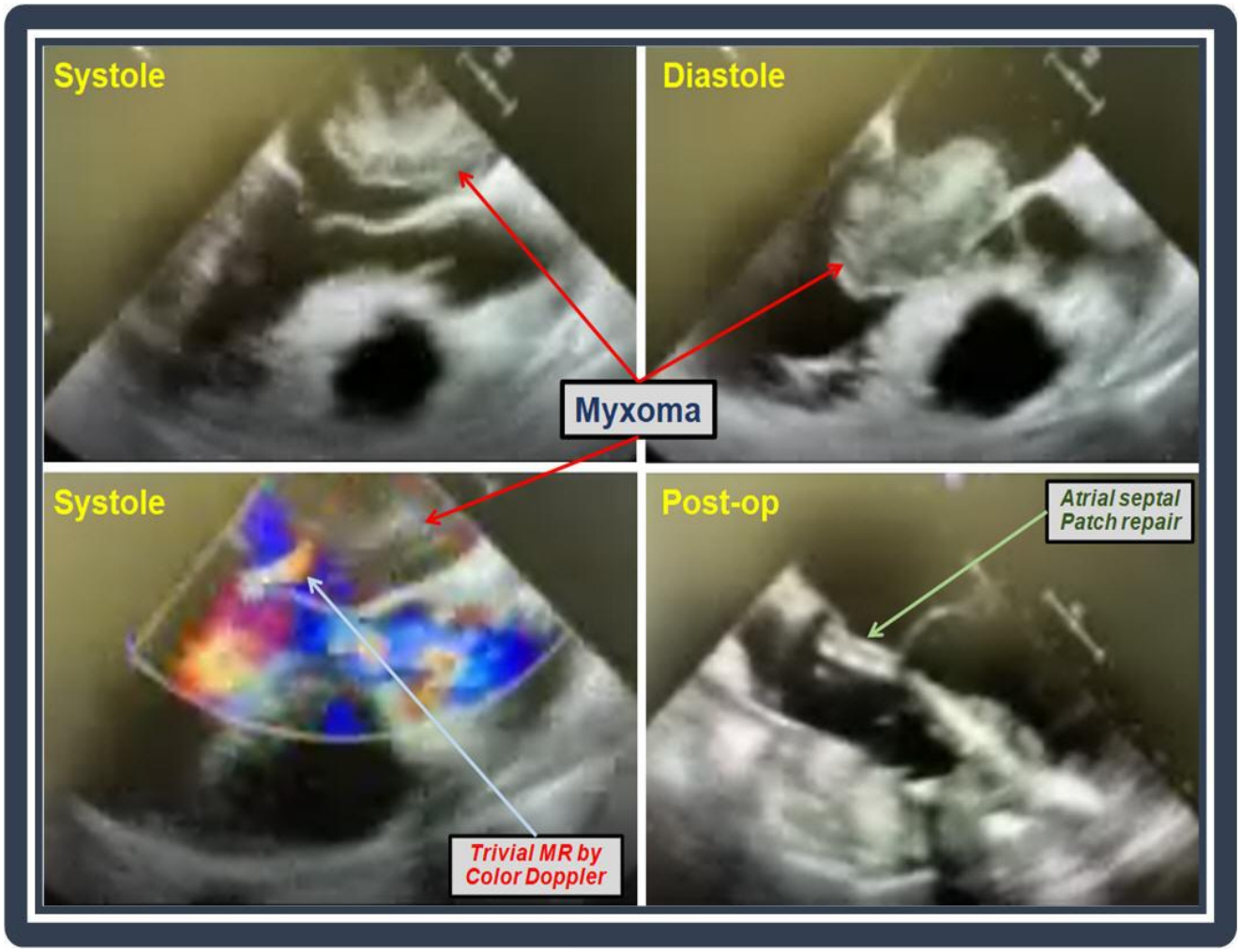
Left Atrial Myxoma.. *The Incredible Bulk!*

Saad Awan, B.S.[a], Muhammad Rafique, M.D.[a], Muhammad Umer Awan, M.D.[b], Amod Amritphale, M.D.[a], G. Mustafa Awan, M.D.[a], Bassam Omar, M.D., Ph.D.[a,c]



Description

The above images and the accompanying video clips reveal multiple transesophageal echocardiography views of a large left atrial myxoma attached to the interatrial septum which is prolapsing into the mitral valve in diastole causing obstruction. Post-operative images are shown, which reveal absence of the myxoma and patch repair of the inter-atrial septum.

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a Division of Cardiology, University of South Alabama, Mobile, AL, USA

b Iowa Methodist Medical Center. The Iowa Clinic, P.C, Des Moines, IA

c Corresponding Author: Bassam Omar, MD, Ph.D. Division of Cardiology, University of South Alabama, 2451 USA Medical Center Dr., Mobile, AL 36617, USA.

Email: bomar@health.southalabama.edu

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Discussion:

Primary cardiac tumors are very rare with an average incidence of 0.02% (0.002% – 0.2%) in unselected autopsy patients [1, 2]. Greater than 75% of PCTs are benign neoplasms; of these, approximately 50% are myxomas [3]. Most cardiac myxoma cases are reported in the fourth to seventh decade of life and are more prevalent in females. Nevertheless, cases are seen in all age and gender groups [4].

Clinical manifestations are dependent on the location and size of the myxoma [5], with unusual manifestation often seen in uncommon tumor locations [6]. Approximately 75% of cardiac myxomas develop in the left atrium, 23% in the right atrium, and the remainder in the ventricles [7]. The three most common causes of symptoms of a cardiac myxoma are hemodynamic changes [8], systemic embolism [9], and cytokine release leading to constitutional symptoms [10]. Commonly observed symptoms and signs are dyspnea, orthopnea, pulmonary edema, cough, and fatigue [11, 12]. Symptoms such as fever and weight loss are seen in 30% of patients, mimicking endocarditis [13]. Additionally, elevations in erythrocyte sedimentation rate [14], globulin levels [15], or C-reactive protein levels [16] are present in up to 35% of patients.

Initial assessment includes taking a detailed clinical history and having a high index of suspicious for cardiac myxoma as it can mimic many systemic disease presentations [17]. Physical examination signs such as cannon “A” wave have been reported in right atrial myxomas [18]. Cardiac auscultation is also crucial for the pathognomonic “tumor plop”, a mid to late diastolic sound [19]. Initial testing is typically conducted using transthoracic or transesophageal echocardiography [20]. Other imaging modalities such as cardiac magnetic resonance (CMR) [21], contrast-enhanced cardiac computed tomography (CCT) [22] may also be helpful in providing more information on the tumor type and location. Multimodality imaging is often utilized to characterize the location, attachments and vascularity of a cardiac myxoma in preparation for surgical intervention [23].

The standard treatment for cardiac myxoma is surgical resection, with low reported complications and good surgical outcomes [24]. When the site of attachment is the atrial septum, this is usually resected, necessitating concomitant atrial septal defect repair (as in images shown above), with successful less invasive thoracoscopic [25] and robotic [26] surgical procedures reported. Rarely, damage to the mitral valve [27] or tricuspid valve [28] necessitates simultaneous valve replacement.

Conclusion:

Cardiac myxomas are rare benign but often bulky tumors with variable clinical presentations which can mimic many cardiac and systemic diseases based on their size, friability and inflammatory potential. Specific physical examination and cardiac auscultation signs can help in the diagnosis. Cardiac myxomas can be familial, part of the Carney complex [29] which may be recurrent [30] or sporadic. Diagnosis often requires multimodality imaging and treatment is usually surgical, requiring a heart-team multidisciplinary approach for optimal outcomes.

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