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Editorial

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Importance of Echocardiographic Features in Long-term Clinical Outcomes of Cardiac Myxomas

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▸ See the article "Twenty Years of Clinical Experience with Cardiac Myxomas: Diagnosis, Treatment, and Follow Up" in volume 27 on page 37.

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Although primary cardiac tumors are rare, myxomas are the most common benign primary cardiac tumors, accounting for 0.3% of open surgical procedures.[1)2)] Unfortunately, related symptoms are often nonspecific, limiting early diagnosis. The most useful diagnostic test is echocardiography, given its high accuracy and sensitivity.[3)] In addition to the diagnostic importance they assume, echocardiographic findings may also provide insight into the clinical courses of such tumors.

Based on a single-center study of patients (N = 378) with cardiac myxomas, Yu et al.[4)] determined that cardiac symptoms were generally reserved for large-sized tumors (> 5 cm in maximum dimension), whereas polypoid and irregular-shaped lesions with motile surfaces evoked embolic symptoms. They also found that these echocardiographic features did not affect mortality. Goswami et al.[5)] studied a more limited series of patients (N = 70) with cardiac myxomas, likewise reporting a relation between largest tumor size (measured by echocardiography) and constitutional symptoms (i.e., fever, weight loss, and arthralgia), as well as symptoms of congestive heart failure and syncope. Small-sized and irregularly shaped myxomas with friable surfaces were instead prone to embolization.

Accordingly, echocardiographic evaluations of myxomas should address overall tumor characteristics, including distribution, points of attachment, surface motility, size, and consistency, to more fully predict the clinical course. Previous studies involving > 20 years of follow-up have indicated that the sporadic form of cardiac myxoma seldom recurs.[2)6)7)] However, younger men, patients with multiple lesions, and those with family history of myxoma are more apt to develop recurrence.[8)]

In this issue of *Journal of Cardiovascular Imaging*, Cianciulli et al.[9)] have correlated clinical presentations and echocardiographic features of cardiac myxoma with perioperative and long-term outcomes after surgical treatment. The study is notable in that they prospectively followed tumors operated upon at their hospital between 1993 and 2013 for a median of 8 years. A total of 53 patients (mean age, 53 ± 16.8 years; women, 62.3%) was evaluated, 47 of whom underwent surgical resection, while the other six patients did not undergo surgery for various reasons. Ultimately, one patient developed recurrence 9 years later, and 87.9% survived for 10 years. Despite the known tendency for familial types of myxoma to recur, there was no such history in this isolated recurrence, and a detailed echocardiographic profile was lacking.

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As they reported, the mean size (long axis) of cardiac myxomas was 4.76 ± 2.00 cm (range, 1-8.20 cm). Again, sizeable myxomas (> 4 cm) and constitutional symptoms showed a significant relation, and large size was linked to obstructive symptoms. The authors also remarked on morphologic aspects of myxomas in echocardiograms, confirming the more ominous nature of a villous (vs. smooth) tumor surface. All patients registering embolic events had villous tumors, indicating high embolic risk.

Documenting the echocardiographic features of myxomas is critical in helping to predict a proclivity for embolic events and gauge the timing of surgical intervention. Echocardiography provides accurate and intuitive information on myxomas, detailing their position, size, surface motility, and overall morphology. Not only is it the first-line diagnostic modality, but it also serves well in evaluating postoperative recurrences during follow-up. Echocardiographic findings reflect both clinical presentations and prognostic ramifications of myxomas, underscoring the key contribution of echocardiography in managing myxomas.

Although their intent was to reinforce the merit of echocardiographic features in predicting clinical courses of myxomas long-term, it is regrettable that fewer patients were included than in previous studies, and that the single recurrence was not chronicled in detail. In addition, if the attributes of myxomas had been comprehensively pursued through multimodality non-invasive imaging (i.e., cardiac computed tomography or magnetic resonance studies), this investigation may have drawn new and abundant implications. For managing cardiac myxoma, further studies using multimodal imaging should be encouraged.

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