The Editor,

Cardiac myxoma is the most common primary cardiac tumor. However, it is very unusual to find cardiac myxoma with severe biventricular dysfunction. We congratulate the authors for successful management of such cases.[1]

Coexisting coronary atherosclerosis and coronary embolization of tumor fragments causing myocardial ischemia are well-known reasons for ventricular dysfunction in patients with left atrial myxoma. The incidence of coronary artery disease in patients with myxoma is between 20.3% and 36.6%.[2,3] Other proposed explanations for the left ventricular dysfunction in such patients were hypercoagulability state in patients with myxoma and raised interleukin-6.[3] Cases reported by Tewari et al. did not undergo preoperative coronary angiography. The reason, we believe, may be younger age groups and hence coronary artery disease was not suspected. Interestingly ventricular function improved immediately after the removal of myxoma. Previously we reported a case of left atrial myxoma with biventricular dysfunction despite having normal coronaries angiographically.[4] However, ventricular function didn’t improve even after removal of tumor. We believe that undiagnosed concomitant dilated cardiomyopathy could have been the reason.

Cardiac myxoma is classified into two types. Type 1 myxoma is with an irregular villous or papillary surface and a soft consistency, and type 2 myxoma is with a smooth surface and a compact consistency.[3] Type 1 myxoma is more common and more fragile and tend to embolize frequently than myxomas with a smooth surface.[3] It is also suggested that repeated impingements of myxoma against the atrial wall or the valve leaflets can form thrombus leading to embolic events.[3] Embolic potential from a cardiac myxoma is mainly influenced by mobility and friability rather than tumor size.[3] Another plausible hypothesis for ventricular dysfunction in cardiac myxoma is coronary steal phenomenon due to highly vascularized mass in the cardiac chamber.[2] In a study of myxoma-related acute myocardial infarction (AMI), it was found that 48.8% of these patients had normal coronary arteries in coronary angiogram.[3] Although causes of the normal coronary angiogram in patients with cardiac myxoma-related AMI remain elusive, author suggested higher spontaneous recanalization rates of the myxomatous embolization as feasible explanation owing to rapid breakdown of the myxomatous materials.[3] Anecdotal case reports have suggested the reversal of cardiac dysfunction after surgical removal of myxoma suggesting the possibility of myocardial depressant effect of myxoma unrelated to coronary occlusion.[5]

In young patients without apparent risk factors of coronary artery disease presenting with AMI and/or ventricular dysfunction, cardiac myxoma should always be placed as one of the differential diagnosis. Although echocardiography evaluates the myxoma in cardiac chambers, coronary angiography is important in identifying the status of coronary emboli and helps in decision-making for further management. Surgically removed myxoma should be subjected to histopathological examination for diagnosis but also the structure should also evaluated for histochemical analysis for cardio-depressant factors particularly in patients with ventricular dysfunction. Endomyocardial biopsy in such patients during the surgery can also help to rule out associated cardiomyopathy. Future studies are certainly warranted in patients with cardiac myxoma with ventricular dysfunction.

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Conflicts of interest
There are no conflicts of interest.

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