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Letter to the Editor

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Author's Reply to Different Aortic Root Diameters on Echocardiography and MRI During Pregnancy in Mosaic Turner Syndrome

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▸ See the letter "Different Aortic Root Diameters on Echocardiography and MRI During Pregnancy in Mosaic Turner Syndrome" in volume 54 on page 760.

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Dear Editor,

We appreciate Dr. Finsterer's interest in our case, and he asked some questions that warrant clarification.[1)] As our case was intended to be a succinct, interesting imaging, some details were not included to focus on the imaging aspects.

The patient did have a prior intervention on her aortic coarctation and was known to have a bicuspid aortic valve (included in figure composite), which is commonly associated with aortopathy. Before presenting to our clinic, she did have prior genetics evaluation, which was unremarkable for any known connective tissue disorders (i.e., Marfan syndrome, Loeys-Dietz, Vascular Ehlers-Danlos, etc.) but did demonstrate mosaic Turner syndrome. Moreover, the patient had no family history of aortopathy or sudden cardiac death, had a normal mitral valve with no prolapse, and had no prior visual difficulties or hyperextensible joints; her physical exam was not suggestive of underlying connective tissue disorders—i.e., normal stature, normal palate, and uvula, no pectus, no dolichocephaly, no scoliosis, etc. With her obstetrics evaluation, she did undergo routine testing, which was negative for syphilis and other sexually transmitted diseases. Atherosclerosis and degenerative aortopathies tend to be in the older population and are not a likely contributing factor in our young patient.

Echocardiography is the initial aortic imaging modality, and it is well-recognized that it has limitations in setting suboptimal acoustic windows and may be suboptimal in accurately assessing aortic dimensions, especially in eccentric aortic dilation, which is not uncommon in patients with bicuspid aortic valve. Consequently, measurements can be underestimated, and echocardiographic imaging should be supplemented with tomographic imaging (non-contrast magnetic resonance imaging [MRI] during pregnancy), which would be superior in providing a more accurate and 3-dimensional assessment of aortic dimensions. In our case, the echocardiogram and the cardiac MRI were obtained on the same day.

After the discovery of the significant aortopathy, the patient was admitted to the hospital and underwent a cesarean-section delivery followed by cardiothoracic surgical intervention

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Conflict of Interest

The authors have no financial conflicts of interest.

Data Sharing Statement

There is not generated data for this case.

Author Contributions

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on the aortic root. No intervention on her well-functioning bicuspid aortic was deemed necessary. With the hemodynamic and physiologic changes of pregnancy, a slight increase in aortic root dimensions is expected, but such minimal changes would not revert to normal within a few days post-delivery and would be negligible contributors in the context of significant aortopathy our patient demonstrated (65 mm). Additional cardiac imaging revealed intact aortic repair with a well-functioning bicuspid aortic valve after the cardiac surgery. With discoveries of additional genes that may lead to aortopathies, future additional genetics testing should be considered along with associated family screening.

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1. Finsterer J. Different aortic root diameters on echocardiography and MRI during pregnancy in mosaic Turner syndrome. *Korean Circ J* 2024;54:760-1. CROSSREF