Author's response to reviews

Title: Rare association of two cardiovascular malformations successfully corrected in a single surgery: A case report

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Author’s response to reviews:

This is indeed a nice report, which I am sure will be appreciated by those who practice congenital heart surgery. My comments are the following:

1. The authors are asked to provide a little more data on the child's background; were these defects suspected during pregnancy? if not, when were they diagnosed, under what circumstances, and what was the reason for her admission to the hospital?

Answer: We have added the sentence in the first line of the case presentation: A 5-year-old Chinese girl was admitted to our hospital because of her upper-limb high blood pressure because of her upper-limb high blood pressure and regular echocardiography indicated the diagnosis and added the sentence in “The pregnancy ultrasound screening in the prenatal diagnosis of fetal heart defects of the patient was negative.” In the fifth line in the case presentation.

2. The authors are asked to provide with the pressure gradients both at the site of the coarctation repair and the pulmonary vein re-implantation at the LA at the 1 year echo study. If possible, please also provide the doppler images from that echo study as well in addition to image figure #3.

Answer: The echocardiography showed that there were no pressure gradients both at the site of the coarctation repair and the pulmonary vein re-implantation at the LA and we have added the sentence in the last sentence of the case presentation.

3. In the Discussion section, the authors are asked to provide a brief description of the embryologic causes for PAPVC and aortic coarctation formation, as these may be related
Answer: we have added another sentence in the discussion section to discuss the embryologic causes for PAPVC “The development of the pulmonary veins is a complicated process that occurs early in embryonic life, the most accepted process was that blood returning from the lung buds initially drains into the splanchnic plexus, which communicates with paired cardinal veins as well as umbilicovitelline veins, after superior vena cava and inferior vena cava formation, pulmonary vein arises as an outpouching from the dorsal wall of the left atrium. With time, the common pulmonary vein communicates with the portion of the splanchnic plexus that drains blood flow from the lungs. Pulmonary venous connections to the cardinal and umbilicovitelline veins normally involute, and the common pulmonary vein becomes incorporated into the dorsal wall of the left atrium, ultimately typically giving rise to four separate pulmonary veins. Pulmonary venous developmental anomalies happen if any of these processes fails to occur properly” and “Coarctation of the aortic arch occurred mainly due to an abnormal development of the fourth aortic arch in the fourth in the first 12 weeks of fetal life. Which may be asymptomatic for a long time and was discovered only by chance and very few showing significant cardiovascular or respiratory symptoms requiring treatment” in the last sentence in the discussion section for brief description of the embryologic causes for aortic coarctation formation.

4. The authors are also asked to provide the estimated incidence of aortic coarctaion in the general population, as they provide the corresponding figures for PAPVC. In fact, aortic coarctation is not an extremely rare congenital defect, and I would therefore consider revising the title of the report, un a manner that will underscore the fact that it is the combination of the two defects that is rare, rather than each of the defects by itself

Answer: We have added the sentence in the last sentence of the discussion section: “Coarctation of the aortic arch is a common diagnosis among congenital cardiac defects, accounting for 6–8% of live births with congenital heart disease, with an estimated incidence of 1 in 2,500 births” and we have changed the title: “Rare association of two cardiovascular malformations successfully corrected in a single surgery: A case report”