Author’s response to reviews

Title: Diagnosis and surgical repair of congenital double aortic arch in infants

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Reviewer #1: In this group of patients, we use Brilliance iCT(128) which is made from Philips to complete it. During the process of CT scan, we have always focused on the protection of sensitive organs, such as the thyroid, gonads and so on. The cardiac CT and airway reconstruction were performed under natural ventilation without tracheal intubation or mechanical ventilation no matter in the time of preoperative or postoperative. The PEEP value was not involved, so there is no difference in the assessment of the airway.

Reviewer #2: We have done the English correction. If there are any problems, we will further modify.
Reviewer #3: The 2000’s report of the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and the No. 68 report of US Committee for Radiation Protection (NCRP) both believe that the lifetime incidence of radiation-induced lethal cancer is 2 to 3 times greater than that of adults since children are in a period of vigorous growth and development. CT has radiation damage, and the sensitive of pediatric radiation damage is 2-3 times greater than adults. Wang Qiang et al. have shown that the age has a significant effect on the size-specific dose estimation (SSDE) of children's chest CT while the sex has no value on it. The Lifetime Attribution Risk (LAR) of lung cancer, gastric cancer, liver cancer, thyroid carcinoma, breast cancer and leukemia caused by radiation doses from pediatric chest CT shows that lung cancer and female breast cancer have higher LAR. When a child under 5 years old receives a radiation dose of 100 mGy for CT, the incidence of fatal cancer increases by about 1%. For this group of patients, it’s necessary to do the CT scan to evaluate the airway, and the radiation doses conform the national regulations. The most important is that we do everything what we can do to protect the sensitive organs to induce the radiation damage.

The correlation between 22q11 and disease is mentioned in the relevant literature. Due to the limitations of national conditions, there is no relevant chromosome or genetic examination for this group of patients, so we have not further explored it. Unfortunately, We regret it. And in the subsequent research, it must be more rigorous and more careful.