

# “Letter to the Editor: Cardiac Surgery in patients with atrial isomerism : Long-term results and outcomes.”

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“Letter to the Editor: Cardiac Surgery in patients with atrial isomerism : Long-term results and outcomes.”

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## **LETTER:**

To the Editor,

We acknowledge that the study in your journal titled, “Cardiac surgery in patients with atrial isomerism: Long-term results and outcomes” by Diego B. Ortega-Zhindón MD et al is brilliantly written and we agree with the conclusion that patients with atrial isomerism must undergo a rigorous evaluation to determine an adequate repair strategy, considering univentricular RAI with a high possibility of morbidity and mortality. However, we would like to add some points which would enhance the quality of this article and help in achieving the aim of this study which is to determine the clinical and surgical outcomes of patients with atrial isomerism (AI) undergoing cardiac surgery.

Firstly, there were some key patient characteristics which were missing in the original study. A single-centered cohort study from China stratified patients not only on broad types of pulmonary venous connections such as partial and total, but also on further types like extra cardiac total anomalous pulmonary venous connection (TAPVC), intra cardiac TAPVC and obstructed TAPVC.<sup>2</sup> This cohort study also included ventriculoarterial connection, interrupted IVC-azygous continuation, interrupted IVC-hemiazygous continuation which were missing from the original study.<sup>2</sup> Inclusion of these patient factors would have increased the validity of the original study.

Secondly, another study included a wide variety of other cardiac procedures in patients with atrial isomerism, which the original study did not include. These additional procedures included atrial septomy, arterial switch operation, coarctation repair-pulmonary arterial band & Norwood stage 1 procedure.<sup>3</sup> These procedures, if studied by the authors of original study, would have helped us better understand the long term impact of cardiac surgery in patients with atrial isomerism.

Thirdly, in another study, some congenital anomalies such as Kartagener syndrome, Digeorge syndrome, Down's syndrome, Klippel Feil syndrome, vertebral defects, anal atresia, cardiac defects, tracheo-esophageal fistula, renal anomalies and limb abnormalities were considered which were not present in the original study.<sup>4</sup> Consideration of these characteristics by authors of the original study would have enhanced quality of the study.

Lastly, the authors in the original study stated that right atrial isomerism was found to be dominant as opposed to left atrial isomerism but a previous study stated that LAI is more common.<sup>5</sup> However several studies showed strong predilection for RAI suggesting there may be racial differences in the expression of LAI and RAI.<sup>6</sup> Consideration of this factor by authors of original study would have given a new dimension to it.

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