

Shared Heart with a Common Atrial Complex and Persistent Right Dorsal Aorta in Conjoined Twins

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Abstract : Although life as a conjoined twin would seem intolerable, there has recently been an increased interest in this subject because of the increasing number of cases where attempts have been made to separate them surgically. We have reviewed articles on cardiovascular anomalies in conjoined twins and presenting rarest anomaly in dicephalus parapagus fetus having two heads attached to one body from the neck or upper chest downwards, with a pair of limbs and a set of reproductive organs. Both the twins shared a common thoracic cavity with a single sternum. When the thoracic cavity was opened, a common anterior mediastinum was found. On opening the pericardium, two separate, closely apposed hearts were exposed. The two cardia are placed side by side. The left heart was slightly larger than the right and were joined at the atrial levels. Four atrial appendages were present, two for each twin. The atrial complex was a common chamber posterior to the ventricles. A single large tributary which could be taken as inferior vena cava drains into the common atrial chamber. In this case, the heart could not be assigned to either twin and therefore, it is referred to as the shared heart within a common pericardial sac. The right and left descending thoracic aorta have joined with each other just above the diaphragm to form a common descending thoracic aorta which has an opening in the diaphragm to be continued as common abdominal aorta which has a normal branching pattern. Upon an interior dissection, it is observed that the two atria have a wide communication which could be a wide patent foramen ovale and this common atrial cavity has a communication with a remnant of a possible common sinus venosus.

Keywords : atrium, congenital anomaly, conjoined twin, sinus venosus

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