The myocardial architecture of cor triloculare bia trium resembling reptiles

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The reptilian heart includes a three-chamber: right and left atria and one partially divided ventricle. This is made up of the non-compacted myocardium which includes ventricular trabeculations. Trabecles, which are poikilothermic, lack an advanced coronary tree in contrary to humans and the trabecular structure of the myocardium provides mainly a direct route of blood supply from the ventricular cavity. Univentricular heart or cor triloculare biatrium represents a wide variety of rare and complex congenital cardiac malformations. Generally, a second rudimentary or hypoplastic accessory ventricle is present. We describe a 21-year-old patient who has been admitted for dyspnoea, cyanosis, and clubbing with univentricular heart. In the following cardiac magnetic resonance imaging (Panel A) and classical ventriculography (Panel B; see Supplementary data online, Video S1), the right and left ventricles appear heavily trabeculated myocardial architecture resembling reptiles.

In reality, during embryonic development, the human heart resembles a reptilian heart. The human heart, like that of a fish, possesses only two chambers in a series in its early embryonic stage. Later, as in reptiles, the atrium is divided into two and the ventricle is partly separated. Finally, with the complete development of interventricular septum, the human heart becomes four-chambered composed of compacted myocardium.

Supplementary data are available at European Journal of Echocardiography online.

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