

The Compactation Process of Ventricular Wall in Images of Humans' Embryos

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Received: April 13, 2020; **Published:** May 25, 2020

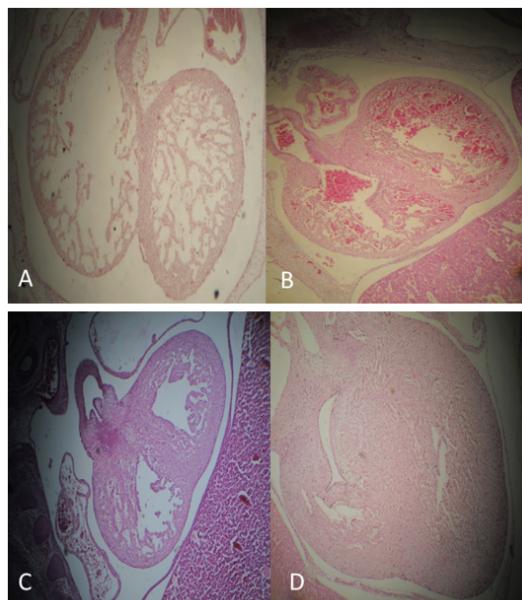
Abstract

The process of compactation is low known. It occurs between fifth and eighth weeks of the embryonic development. The images show a sequence of this process in humans' embryos between 17 to 23 Carnegie's stages. These embryos belong to a collection that is property of Medical Science University of Santa Clara, Cuba.

Keywords: Ventricular Wall; Ventricular Compactation Process; Longitudinal Sections of Heart; Humans' Embryos

There are few researches about morphogenesis of ventricular myocardium in humans' embryos. Principally the process of compactation is low known. It occurs between fifth and eighth weeks of the embryonic development. The images show a sequence of this process in humans' embryos between 17 to 23 Carnegie's stages. These embryos belong to a collection that is property of Medical Science University of Santa Clara, Cuba. The photos were taken by a cannon camera adapted to the microscope with four x of magnification.

The external layer of ventricular wall increase it thickness at the same time the embryo's development advance. In panel A is showed the longitudinal section of an embryo named M-57-16-T that it is in 17 Carnegie's stage, its compact wall is very thin, but trabecular is thicker, similar to a sponge, with sinusoids. An embryo in 18 Carnegie's stage is in panel B (M-5-15-T), it has a thin compact layer too, but the trabecular is thinner that in panel A and there are blood inside. Another human embryo (E-24) is in panel C, it is in 19 Carnegie's stage, its external compact wall is obviously thicker that previous, principally in left ventricle. The morphological changes from 20 to 23 Carnegie's stages are not significant; it's only interesting that dimensions are higher. In human embryo M-26-28-T, showed in panel D, it is in 23 Carnegie's stage. The external layer of ventricular wall is the thickest of this sample and the internal that it is still trabecular is the thinnest in both ventricles. The observation of histological sections of the heart in human embryos made possible to prove the changes in quality of ventricular wall relatives to compactation process.



Volume 7 Issue 6 June 2020

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