

Diagnostic Exercise

From The Davis-Thompson Foundation*

Case #: 118 Month: April Year: 2019

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Clinical History: Sixteen-week-old C57BL6 mouse from the International Mouse Phenotyping Consortium (IMPC) generated and phenotyped at The Centre for Phenogenomics (Toronto, Canada). A protruded xyphoid was reported in this colony affecting both transgenic and WT mice; males were affected >2X females. Thoracic x-ray is provided from affected and non-affected mouse (Figure 1). Figure 6 provides a thoracic anatomical/topological reference.

Laboratory Findings: Plasma chemistry on week 16 showed minimal and inconsistent increase in AST in affected mice.

Necropsy Findings: Necropsy findings from one of the mice with protruded xyphoid revealed a fibrous adhesion between the sternum and the pericardium (Figure 2B). Attached to the center of the inner surface of the sternum (thoracic surface) is a 3x3x2 mm firm/hard nodular mass (Figure 2D). The right ventricular epicardial surface overlying this nodular mass had a ~ 3x3 mm area of pallor (Figure 2F). Remark: The x-ray, gross, and microscopic images provided may not be from the same animal.

Gross and Microscopic Image(s):

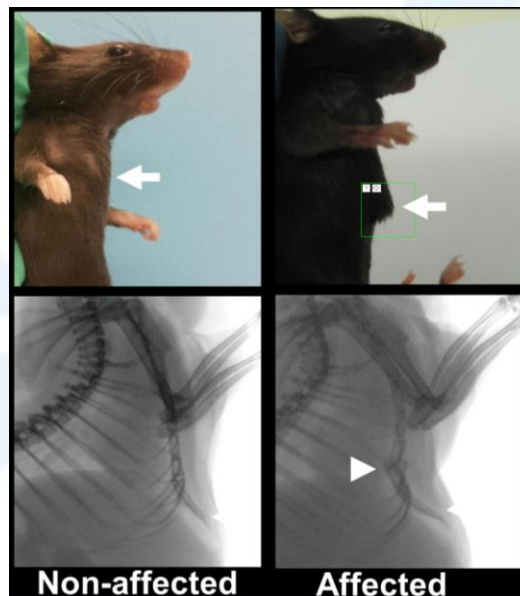


Figure 1. Live phase photo and thoracic x-ray of affected and non-affected mice.

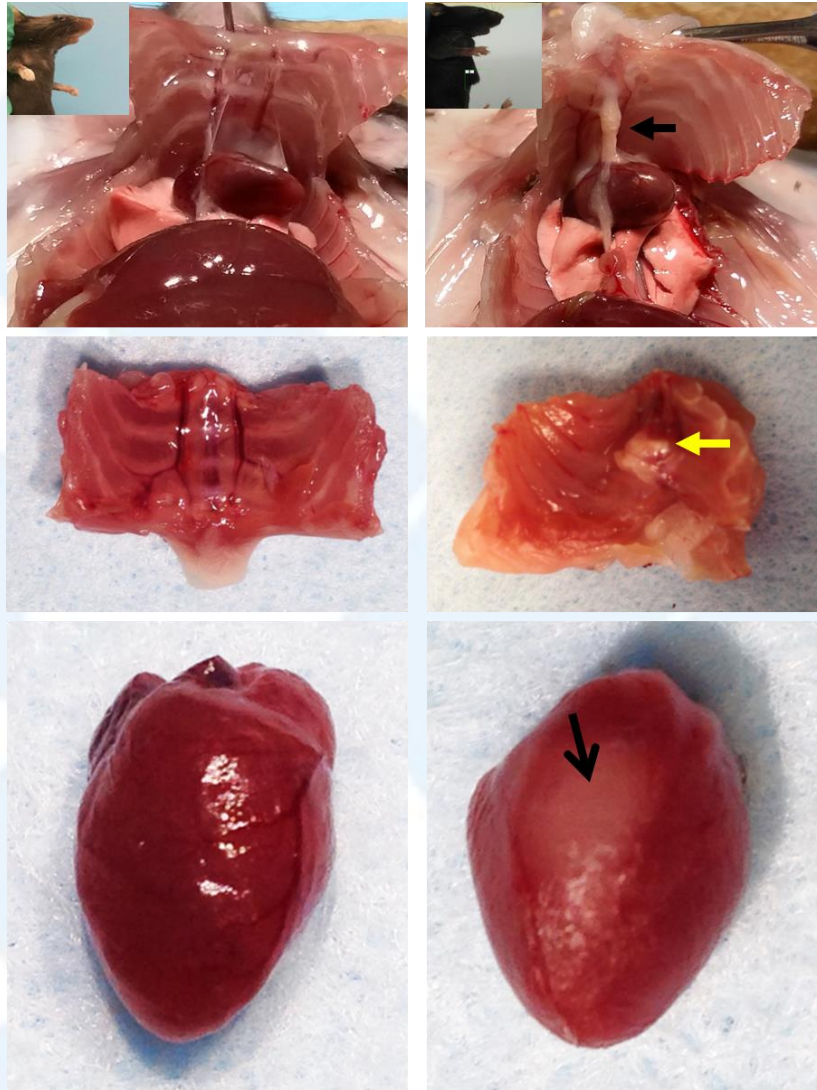


Figure 2. Gross findings. Non-affected (Left) and affected (Right).

Follow-up questions: Morphologic diagnoses, potential relationship between the sternal and cardiac lesions, potential etiology/cause, comparative pathology significance.

*The Diagnostic Exercises are an initiative of the **Latin Comparative Pathology Group (LCPG)**, the Latin American subdivision of The Davis-Thompson Foundation. These exercises are contributed by members and non-members from any country of residence. Consider submitting an exercise! A final document containing this material with answers and a brief discussion will be posted on the CL Davis website (http://www.cldavis.org/diagnostic_exercises.html).

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