NTP Nonneoplastic Lesion Atlas

Thymus – Amyloid

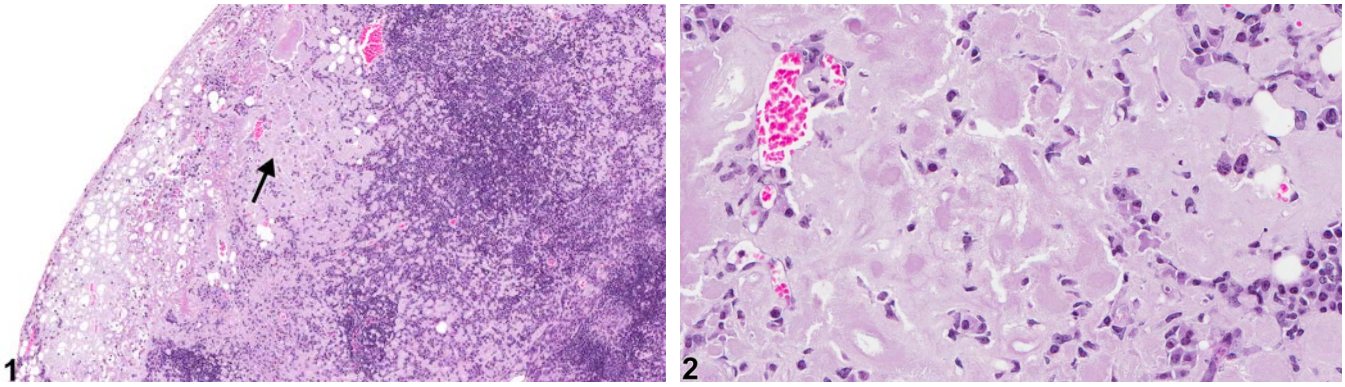


Figure Legend: Figure 1 Thymus - Amyloid in a female B6C3F1/N mouse from a chronic study. Normal thymic architecture has been disrupted by deposition of amyloid protein (arrow). **Figure 2** Thymus - Amyloid in a female B6C3F1/N mouse from a chronic study (higher magnification of Figure 1). Amyloid protein is amorphous, eosinophilic, and extracellular.

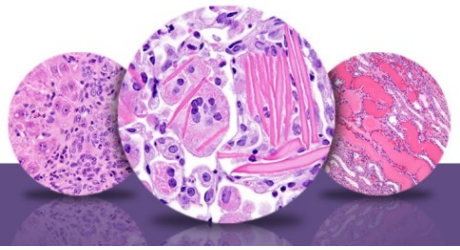
Comment: Spontaneous and chemically induced amyloid deposition in the thymus is rare in rodents. When present in the thymus, amyloid appears as amorphous, eosinophilic, and hyalinized extracellular material with hematoxylin and eosin (H&E) staining (Figure 1 and Figure 2, arrows). Amyloid can be identified by apple-green birefringence when stained with Congo red and visualized under polarized light.

Recommendation: Whenever present in the thymus, amyloid should be diagnosed and graded. Because amyloidosis is a systemic disease, other tissues, such as liver and kidney, should also be evaluated for amyloid deposition. Secondary lesions, such as necrosis or degeneration of parenchymal cells, should not be diagnosed separately unless warranted by severity or important for interpretation of study results, but should be described in the pathology narrative.

References:

National Toxicology Program. 2002. NTP TR-507. Toxicology and Carcinogenesis Studies of Vanadium Pentoxide (CAS No. 1314-62-1) in F344/N Rats and B6C3F1 Mice (Inhalation Studies). NTP, Research Triangle Park, NC.
Abstract: http://ntp.niehs.nih.gov/go/14892

Peckham JC. 2002. Animal histopathology. In: Handbook of Toxicology, 2nd ed (Derelanko MJ, Hollinger MA, eds). CRC Press, Boca Raton, FL, 685.



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