CMHD Pathology Report

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ReportID: Report Date: November 23, 2011
Pathologist: H. Adissu

CMHD LabID: N11-381

Relevant History:
(Stress Induced Hyperthermia) Decreased response to stress-induced hyperthermia

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AnimalID: M00208239 Socs7

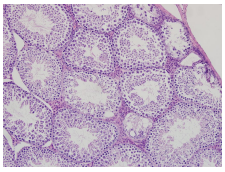
Histopathology Findings:

testis (MA:0000411)

Histopath Description:
Multifocally, contingent seminiferous tubules are vacuolated and contain no germ cells or have no spermatogenesis activity. Many of these vacuolated seminiferous tubules contain one or two large multinucleated giant cells and aggregates of degenerate or necrotic spermatids. There are occcasional mineralization within some tubules.

Morphological Diagnosis:
Distribution: Multifocal; **Severity:** moderate;

Definitive Diagnosis:
Testicular degeneration.



Testis, degeneration, 20x

liver (MA:0000358)

Histopath Description:
The overall hepatic lobular architecture is normal. Diffusely, hepatocytes contain intracytoplasmic clear vacuoles (lipid). The lipid vacuoles within the midzonal and periacinar regions are small (2-3 um in diameter) and surround a central nucleus (interpreted as microvesicular lipid). The lipid vacuoles within the portal areas are large (8-12 um in diameter) and displace the nucleus to the margin (macrovesicular lipid).

Morphological Diagnosis:
Distribution: Diffuse; **Severity:** moderate; **MPATH Diagnosis:** lipid deposition MPATH:42

Definitive Diagnosis:
Hepatic lipidosis

Histopathology Comments:
Hepatocellular vacuolar change of variable degree suggestive of lipidosis is present in all mice from WTSI, consistent with high lipid diet.

kidney (MA:0000368)

Histopath Description:
There is a focal perivascular aggregate of macrophages, lymphocytes and rare plasma cells at the corticomedullary junction of one of the kidneys.

Morphological Diagnosis:
Duration: Chronic-active; **Distribution:** Focal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:
Focal perivascular inflammatory aggregate.

brain (MA:0000168)

Histopath Description:
There is a mild enlargement of the lateral ventricle.

Morphological Diagnosis:
Severity: mild; **MPATH Diagnosis:** degenerative change MPATH:14

Definitive Diagnosis:
hydrocephalus, lateral ventricle

Histopathology Comments:
Variable degree of hydrocephalus is observed in a proportion of wild type C57 Black 6 mice.

salivary gland (MA:0000346)

Histopath Description:
There are multifocal interstitial aggregate of histiocytes and lymphocytes.

Morphological Diagnosis:
Duration: Chronic; **Distribution:** Multifocal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:
Interstitial histiocytic and lymphocytic sialadenitis

Histopathology Comments:
This is a common and insignificant incidental finding in mice.

eye (MA:0000261)

Histopath Description:
One of the eyes is markedly hypoplastic (micropathalmic); it is composed of a cavity lined by a thick layer of pigmented structure (undeveloped choroid) surrounded by a thick collagenous capsule.

Morphological Diagnosis:
Distribution: Unilateral; **Severity:** extreme; **MPATH Diagnosis:** developmental and structural abnormality MPATH:55

Definitive Diagnosis:
Microphtalmia, unilateral

Histopathology Comments:
Microphtalmia and other ocular defects are noted as incidental lesion in C57BL6/B6 mice.

lymph node (MA:0000139)

Histopath Description:
The mesenteric and cervical lymph nodes are respectively enlarged nearly 4x and 2x normal and follicles are respectively prominent. Subcapsular sinues contain large numbers of mature lymphocytes. There low numbers of neutrophils within the medullary stroma.

Morphological Diagnosis:
Duration: Sub-acute; **Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:** hyperplasia MPATH:134

Definitive Diagnosis:
Lymphoid hyperplasia.

Histopathology Comments:
The changes in the mesenteric lymph node are suggestive of draining of a regional inflammatory process. However, such a process was not observed in the tissues examined.

AnimalID: M00208243 Socs7

Histopathology Findings:

lymph node (MA:0000139)

Histopath Description:

The mesenteric lymph node is enlarged nearly 3x normal and follicle are prominent. Subcapsular sinues contain large numbers of mature lymphocytes. There low numbers of neutrophils within the medullary stroma.

Morphological Diagnosis:
Duration: Sub-acute; **Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:** hyperplasia MPATH:134

Definitive Diagnosis:
Lymphoid hyperplasia.

Histopathology Comments:
The changes in the mesenteric lymph node are suggestive of draining of a regional inflammatory process. However, such a process was not observed in the tissues examined.

salivary gland (MA:0000346)

Histopath Description:
There are multifocal interstitial aggregate of histiocytes and lymphocytes.

Morphological Diagnosis:
Duration: Chronic; **Distribution:** Multifocal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:
Interstitial histiocytic and lymphocytic sialadenitis

Histopathology Comments:
This is a common and insignificant incidental finding in mice.

liver (MA:0000358)

Histopath Description:
The overall hepatic lobular architecture is normal. Diffusely, hepatocytes contain intracytoplasmic clear vacuoles (lipid). The lipid vacuoles within the midzonal and periacinar regions are small (2-3 um in diameter) and surround a central nucleus (interpreted as microvesicular lipid). The lipid vacuoles within the portal areas are large (8-12 um in diameter) and displace the nucleus to the margin (macrovesicular lipid).

Morphological Diagnosis:
Distribution: Diffuse; **Severity:** moderate; **MPATH Diagnosis:** lipid deposition MPATH:42

Definitive Diagnosis:
Hepatic lipidosis

Histopathology Comments:
Hepatocellular vacuolar change of variable degree suggestive of lipidosis is present in all mice from WTSI, consistent with high lipid diet.

brown fat (MA:0000057)

Histopath Description:
There is a focally extensive non suppurative inflammation of the brown fat. There is accompanying brown fat hyperplasia.

Morphological Diagnosis:
Distribution: Focal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:
Mildnon-suppurative steatitis with brown fat hyperplasia

Histopathology Comments:
The lesion is likely an extension of an overlying dermatitis and inflammation of the subcutaneous fat (paniculits)

spleen (MA:0000141)

Histopath Description:
The spleen contains multiple follicles with prominent germinal centers. The marginal zones are mildly expanded by histiocytes.

Morphological Diagnosis:
Duration: Sub-acute; **Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:** hyperplasia MPATH:134

Definitive Diagnosis:
Hyperplasia

Histopathology Comments:
The changes lymph nodes suggest increased circulating antigens (likely associated with bacterial pneumonia).

AnimalID: M00208329 Socs7

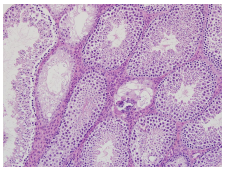
Histopathology Findings:

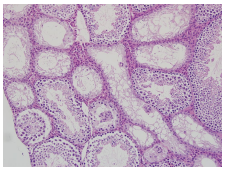
testis (MA:0000411)

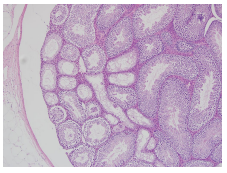
Histopath Description:
Rare seminiferous tubules are vacuolated and contain no germ cells or have no spermatogenesis activity.

Morphological Diagnosis:
Distribution: Multifocal; **Severity:** mild; **MPATH Diagnosis:** degenerative change MPATH:14

Definitive Diagnosis:
Testicular degeneration.


Testis, degeneration, note mineralization, 20x


Testis, degeneration, 20x


Testis, degeneration, 10x

eye (MA:0000261)

Histopath Description:
In both eyes, a 100 uM stalk of fibrous connective tissue containing a small artery in the center extends from the area of the optic disc towards the posterior vitreous. A small fragment of fibrous tissue is freely present within the vitreous anterior to this stalk (assumed to be extension of the stalk).

Morphological Diagnosis:
Distribution: Bilateral;

Definitive Diagnosis:
Persistent hyaloid artery

Histopathology Comments:
hyaloid artery remnant is a rare condition in which there remain some parts of the hyaloid artery. The posterior hyaloid vascular system of mice usually undergoes involution in the first month of life (Richard et al., 2000).

brown fat (MA:0000057)

Histopath Description:
There is a focally extensive non suppurative inflammation of the brown fat. There is accompanying brown fat hyperplasia.

Morphological Diagnosis:
Distribution: Focal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:
Mildnon-suppurative steatitis with brown fat hyperplasia

Histopathology Comments:
The lesion is likely an extension of an overlying dermatitis and inflammation of the subcutaneous fat (paniculits)

spleen (MA:0000141)

Histopath Description:
The spleen contains multiple follicles with prominent germinal centers. The marginal zones are mildly expanded by histiocytes.

Morphological Diagnosis:
Duration: Sub-acute; **Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:** hyperplasia MPATH:134

Definitive Diagnosis:
Hyperplasia

Histopathology Comments:
The changes lymph nodes suggest increased circulating antigens (likely associated with bacterial pneumonia).

liver (MA:0000358)

Histopath Description:
There is diffuse hepatic lipidosis.

Morphological Diagnosis:
Distribution: Diffuse; **Severity:** severe; **MPATH Diagnosis:** lipid deposition MPATH:42

Definitive Diagnosis:
Hepatic lipisosis

lymph node (MA:0000139)

Histopath Description:
The mesenteric lymph node is enlarged nearly 4x normal and follicle are prominent. Subcapsular sinues contain large numbers of mature lymphocytes. There low numbers of neutrophils within the medullary stroma.

Morphological Diagnosis:
Duration: Sub-acute; **Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:** hyperplasia MPATH:134

Definitive Diagnosis:
Lymphoid hyperplasia.

Histopathology Comments:
The changes in the mesenteric lymph node are suggestive of draining of a regional inflammatory process. However, such a process was not observed in the tissues examined.

AnimalID: M00208349 Socs7

Organ/Tissue Analyzed:
There were no significant findings in the following tissues: Calvarium, brain, eyes, ears, tongue, Harderian gland, zymbal gland, salivary glands, nasal sinuses, teeth, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, spleen, liver, gall bladder, exocrine and endocrine pancreas, esophagus, stomach, intestines, urinary organs and tract, adrenal gland, reproductive organs, lymph nodes, spinal cord, bones, bone marrow, skeletal muscles, brown fat, and skin.

Report Summary and Recommendation:
Marked lymphoid hyperplasia present in 3/4 mice. Various incidental lesions are present. Persistent hyaloid artery and testicular degeneration are not considered incidental.

Testis: Degenerative change : MPATH:14
Eye: developmental and structural abnormality: MPATH:55