



CMHD Pathology Report



CMHD Pathology Core

Toronto Centre for
Phenogenomics
25 Orde St. 3rd fl.
Toronto, Ont. M5T 3H7
Tel.(416) 586-8375
Fax (416) 586-5993

contact: Dr. Susan
Newbigging
email:
newbigging@lunenfeld.ca

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

Mouse Genetics Project

Wellcome Trust Sanger
Institute
Wellcome Trust Genome
Campus
Hinxton, Cambridge
CB10 1SA
UK

CMHD LabID: N11-197

AnimalID: M00166751 Lrrc16a hom

Tissue Preservation and Staining:

Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Histopathology Findings:

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). There are rare perivascular mononuclear inflammatory cells.

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.

lymph node (MA:0000139)

Histopath Description:

The mesenteric lymph node is enlarged (greater than three-fold). There are multiple follicles with large germinal centers. The sinuses contain large numbers of mature lymphocytes.

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.

pancreatic duct (MA:0000124)

Histopath Description:

The submucosa and to a less extent the epithelium of the main pancreatic duct is infiltrated by moderate numbers of neutrophils along the whole available section. Rare neutrophils are also present within the duct.

Morphological Diagnosis:

Duration: Sub-acute; **Distribution:** Multifocal; **Severity:** moderate; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:

Neutrophilic pancreatitis, ductular.

Histopathology Comments:

The lesion was likely caused by an ascending bacterial infection from the intestine.

stomach (MA:0000353)**Histopath Description:**

There are rare eosinophils and neutrophils within the deep lamina propria

Morphological Diagnosis:

Duration: Sub-acute; **Distribution:** Multifocal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:

Gastritis, suppurative

Histopathology Comments:

This lesion is most commonly associated with Helicobacter infection. Further investigation is suggested using histochemistry (Silver stain) or colony fecal PCR.

brain (MA:0000168)**Histopath Description:**

There is a mild enlargement of the lateral ventricle.

Morphological Diagnosis:

Severity: mild; **MPATH Diagnosis:** hydrocephalus MPATH:639

Definitive Diagnosis:

hydrocephalus, third ventricle

Histopathology Comments:

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

bone marrow (MA:0000134)**Histopath Description:**

Nearly one-third of the femoral bone marrow is replaced by well differentiated lymphoid tissue with features reminiscent of cortical nodules and a hypocellular medullary-like compartment in the center. Occasional mitotic cells are present within the centre.

Morphological Diagnosis:

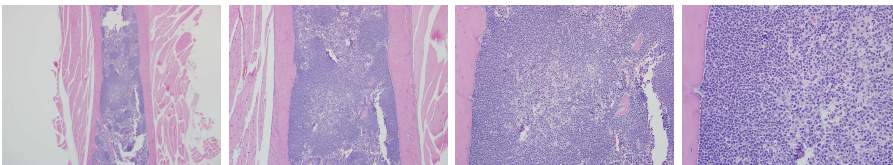
Distribution: Multifocal; **Severity:** mild; **MPATH Diagnosis:** metaplasia MPATH:160

Definitive Diagnosis:

lymphoid metaplasia

Histopathology Comments:

This is a rare condition rarely reported in non human primates. We are not aware a report in mice. We speculate that this may also represent a hyperplastic response to inflammatory lesions uniquely seen in this mouse (inflammation of the pancreatic duct).

**Organ/Tissue Analyzed:**

NSF will be appended

AnimalID: M00166754 Lrrc16a hom**Tissue Preservation and Staining:**

Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Histopathology Findings:**lymph node (MA:0000139)****Histopath Description:**

The mesenteric lymph node is enlarged (greater than three-fold). There are multiple follicles with large germinal centers. The sinuses contain large numbers of mature lymphocytes.

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.

liver (MA:0000358)**Histopath Description:**

The overall hepatic lobular architecture is normal. Approximately 50% of hepatocytes within the midzonal region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid). There are rare foci of neutrophilic clusters with rare nuclear fragments.

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** moderate; **MPATH Diagnosis:** lipid deposition MPATH:42

Definitive Diagnosis:

Hepatic lipidosi.

Histopathology Comments:

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

brain (MA:0000168)**Histopath Description:**

There is a mild enlargement of the lateral ventricle.

Morphological Diagnosis:

Severity: mild; **MPATH Diagnosis:** hydrocephalus MPATH:639

Definitive Diagnosis:

hydrocephalus, lateral ventricle

Histopathology Comments:

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

spleen (MA:0000141)**Histopath Description:**

There is mild expansion of the marginal zones of the spleen. There are rare germinal centers in some of the follicles.

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** mild; **MPATH Diagnosis:** hyperplasia MPATH:134

Definitive Diagnosis:

Mild germinal hyperplasia

Histopathology Comments:

The changes suggest antigenic stimulation.

Organ/Tissue Analyzed:

NSF will be appended

AnimalID: M00166767 Lrrc16a hom**Tissue Preservation and Staining:**

The thyroid gland is not present in section. Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Histopathology Findings:**liver (MA:0000358)****Histopath Description:**

The overall hepatic lobular architecture is normal. Approximately 25% of hepatocytes within the midzonal region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid). There are rare foci of neutrophilic clusters with rare nuclear fragments.

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** moderate; **MPATH Diagnosis:** lipid deposition MPATH:42

Definitive Diagnosis:

Hepatic lipidosi.

Histopathology Comments:

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

thymus (MA:0000142)**Histopath Description:**

There is a 200 um diameter epithelial inclusion cyst within the thymus

Morphological Diagnosis:

Distribution: Focal; **Severity:** mild; **MPATH Diagnosis:** developmental and structural abnormality MPATH:55

Definitive Diagnosis:

Focal epithelial inclusion cyst

brown fat (MA:0000057)**Histopath Description:**

There is a focally extensive non suppurative inflammation of the brown fat.

Morphological Diagnosis:

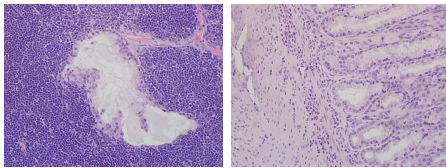
Distribution: Focal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:

Mild lymphocytic steatitis

Histopathology Comments:

The lesion is likely an extension of an overlying dermatitis and inflammation of the subcutaneous fat (paniculitis)

**Organ/Tissue Analyzed:**

NSF will be appended

AnimalID: M00166769 Lrrc16a hom**Tissue Preservation and Staining:**

The dermis and hypodermis are artefactually separated. Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Histopathology Findings:**liver (MA:0000358)****Histopath Description:**

The overall hepatic lobular architecture is normal. Approximately 50% of hepatocytes within the midzonal region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid). There are rare foci of neutrophilic clusters with rare nuclear fragments.

Morphological Diagnosis:

Distribution: Multifocal; **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.

stomach (MA:0000353)**Histopath Description:**

There are large numbers of neutrophils and moderate numbers of eosinophils within the lamina propria of the glandular region at the limiting ridge.

Morphological Diagnosis:

Duration: Sub-acute; **Distribution:** Multifocal; **Severity:** moderate; **MPATH Diagnosis:** inflammation MPATH:212

Definitive Diagnosis:

Gastritis, suppurative

Histopathology Comments:

This lesion is most commonly associated with Helicobacter infection. Further investigation is suggested using histochemistry (Silver stain) or colony fecal PCR. The presence of eosinophils suggest allergic cause.

Organ/Tissue Analyzed:

NSF will be appended

Summary:

Incidental lesions attributable to diet or strain background are observed in this line. A unique finding in one of the mice is lymphoid metaplasia/hyperplasia of the bone marrow.

Report Summary and Recommendation:

Incidental lesions attributable to diet or strain background are observed in this line. A unique finding in one of the mice is lymphoid metaplasia/hyperplasia of the bone marrow.