



CMHD Pathology Report



CMHD Pathology Core

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ReportID: Report Date: November 23,
2011
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Mouse Genetics Project

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

CMHD LabID: N10-1392

Relevant History:

(Viability at postnatal day 14; Body Weight Curves; Indirect Calorimetry; Glucose Tolerance (ip); Body Composition (DEXA); X-ray Imaging; Plasma Chemistry; Peripheral Blood Lymphocytes)

AnimalID: M00370210 AKAP-9 HET

Tissue Preservation and Staining:

The following tissues were not submitted: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Histopathology Findings:

brain (MA:0000168)

Histopath Description:

There is a moderate dilation 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.

liver (MA:0000358)

Histopath Description:

The overall hepatic lobular architecture is normal. Nearly 10% of hepatocytes within the midzonal and periacinar regions contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid).

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** mild; **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 WTSl, consistent with high fat diet.

skin (MA:0000151)

Histopath Description:

Focally there is a dome-shaped epidermal hyperplasia (nearly three fold compared to adjacent unaffected epidermis). There is serocellular crust overlying this focus. There is mild corresponding dermal fibrosis and rare mononuclear inflammatory cells.

Morphological Diagnosis:

Duration: Chronic; **Distribution:** Focal; **Severity:** mild; **MPATH Diagnosis:** dermatitis MPATH:196

Definitive Diagnosis:

Exudative dermatitis with dermal fibrosis and acanthosis

Histopathology Comments:

The lesion is suggestive of a recent and a resolving dermatitis likely caused by trauma or could be part of idiopathic ulcerative dermatitis seen in mice with a C57BL/6 background.

Organ/Tissue Analyzed:

There were no significant findings in the following tissues: Eyes, ears, tongue, Harderian gland, zymbal gland, salivary glands, nasal sinuses, teeth, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, spleen, 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.

Summary:

Various incidental lesions were found. These lesions were also variably documented in the wild type control mice. Hepatic lipidosis is milder in this line compared to controls.

AnimalID: M00340469 AKAP-9 HET**Tissue Preservation and Staining:**

Tissue preservation and staining are excellent. The urinary bladder is not present in the block. The following tissues were not submitted: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

Histopathology Findings:**salivary gland (MA:0000346)****Histopath Description:**

Within the mandibular salivary gland there is a focal aggregates of lymphocytes, histiocytes, and low numbers of plasma cells.

Morphological Diagnosis:

Distribution: Focal; **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. Nearly 10% of hepatocytes within the midzonal and periacinar regions contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid).

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** mild; **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 fat diet.

parathyroid gland (MA:0000128)**Histopath Description:**

A 200x150 um lymphoid tissue with distinct cortex and medulla typical of thymic tissue is present adherent to the parathyroid.

Morphological Diagnosis:

Distribution: Focal; **Severity:** mild; **MPATH Diagnosis:** ectopia [obsolete use MPATH:76] MPATH:69

Definitive Diagnosis:

Parathyroid-associated ectopic thymic tissue

Histopathology Comments:

Ectopic thymic tissue including association with the parathyroid gland has been described in mice (Dooley J et al., 2006 Journal of immunology).

Organ/Tissue Analyzed:

There were no significant findings in the following tissues: brain, eyes, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, trachea, lungs, heart, thymus, thyroid gland, spleen, 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.

Summary:

Three of the mice in this group have mild hydrocephalus involving the lateral ventricle.

AnimalID: M00340470 AKAP-9 HET

Tissue Preservation and Staining:

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

Histopathology Findings:

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.

stomach (MA:0000353)

Histopath Description:

There are low numbers of neutrophils within the deep lamina propria and submucosa.

Morphological Diagnosis:

Duration: Chronic-active; **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.

liver (MA:0000358)

Histopath Description:

The overall hepatic lobular architecture is normal. Nearly 15% of hepatocytes within the midzonal and periacinar regions contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid). Focally hepatocytes within the vicinity of the gall bladder are diffusely vacuolated (microvesicular lipid) (tension lipidosis)

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** mild; **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 fat diet.

Organ/Tissue Analyzed:

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

AnimalID: M00501993 AKAP-9 Homo

Tissue Preservation and Staining:

The following tissues were not submitted: 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. Nearly 10% of hepatocytes within the midzonal and periportal regions contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid).

Morphological Diagnosis:

Distribution: Multifocal; **Severity:** mild; **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 fat 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.

Organ/Tissue Analyzed:

There were no significant findings in the following tissues: Eyes, ears, tongue, Harderian gland, zymbal gland, salivary glands, nasal sinuses, teeth, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, spleen, 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:

Three of the mice in this group have mild hydrocephalus involving the lateral ventricle.