



CMHD Pathology Report



CMHD Pathology Core

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ReportID: Report Date: July 11, 2013
Pathologist: Dr. H. Adissu

Mouse Genetics Project

Wellcome Trust Sanger
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Hinxton, Cambridge
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UK

CMHD LabID: N13-470

Relevant History:

Phenotype:

decreased bone mineral content
decreased length of long bones
fragile skeleton

AnimalID: M00224805 (Female)

Histopathology Findings:

liver (MA:0000358)

Histopath Description:

diffuse lipidosis

Morphological Diagnosis:

Distribution: diffuse; **Severity:** severe; **MPATH Diagnosis:** steatosis MPATH:622

Definitive Diagnosis:

Hepatic lipidosis

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.

parathyroid gland (MA:0000128)

Histopath Description:

There are large well demarcated clusters of lymphoid cells within the parathyroid gland

Morphological Diagnosis:

Distribution: multifocal;

Definitive Diagnosis:

Ectopic thymic tissue

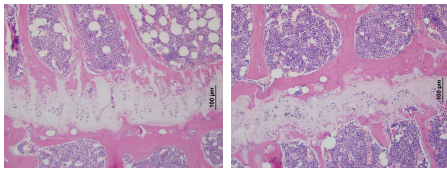
Histopathology Comments:

incidental

tibia (MA:0001361)

Morphological Diagnosis:**Severity:** no lesions;**Definitive Diagnosis:**

Normal

Tibia, WT_female,
growth plate,
normal, 20x, HETibia, growth plate,
normal, 20x, HE**Organ/Tissue Analyzed:**

Histopathology examination included the following organs and tissues: brain, trigeminal ganglion, eyes, salivary glands, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, exocrine and endocrine pancreas, oesophagus, stomach, small intestine, large intestine, liver, gall bladder, spleen, kidneys, adrenal gland, lymph nodes, spinal cord, bone marrow, sternum, femur and tibia with associated skeletal muscles, brown fat, pinna, skin, uterus, oviduct, and ovary, and mammary gland.

AnimalID: M00202314 (Female)**Histopathology Findings:****liver (MA:0000358)****Histopath Description:**

lipidosis

Morphological Diagnosis:**Distribution:** multifocal; **Severity:** mild;**Definitive Diagnosis:**

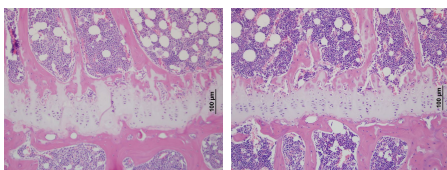
Hepatic lipidosis

tibia (MA:0001361)**Histopath Description:**

The tibial growth plate is slightly thin compared to WT control

Morphological Diagnosis:**Distribution:** diffuse; **Severity:** mild;**Definitive Diagnosis:**

Tibial growth plate hypoplasia

Tibia, WT_female,
growth plate,
normal, 20x, HETibia, growth plate,
hypoplasia, 20x, HE**Organ/Tissue Analyzed:**

Histopathology examination included the following organs and tissues: brain, trigeminal ganglion, eyes, salivary glands, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, exocrine and endocrine pancreas, oesophagus, stomach, small intestine, large intestine, liver, gall bladder, spleen, kidneys, adrenal gland, lymph nodes, spinal cord, bone marrow, sternum, femur and tibia with associated skeletal muscles, brown fat, pinna, skin, uterus, oviduct, and ovary, and mammary gland.

AnimalID: M00224807 (Male)**Histopathology Findings:****liver (MA:0000358)****Histopath Description:**

lipidosis

Morphological Diagnosis:

Distribution: diffuse; **Severity:** extreme; **MPATH Diagnosis:** steatosis MPATH:622

Definitive Diagnosis:

Hepatic lipidosis

thymus (MA:0000142)

Histopath Description:

There is a 50 um diameter epithelial cyst.

Morphological Diagnosis:

Distribution: focal; **MPATH Diagnosis:** cyst MPATH:62

Definitive Diagnosis:

Epithelial cyst

Histopathology Comments:

This is a developmental abnormality commonly seen in mice.

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.

tibia (MA:0001361)

Histopath Description:

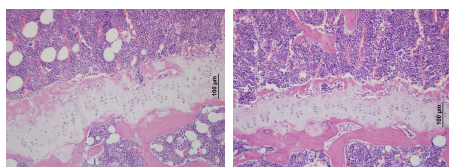
The tibial growth plate is slightly thin compared to WT control

Morphological Diagnosis:

Distribution: diffuse; **Severity:** mild;

Definitive Diagnosis:

Tibial growth plate hypoplasia



Tibia, WT_male,
growth plate,
normal, 20x, HE

Tibia, growth plate,
hypoplasia
(compare to WT),
20x, HE

brain (MA:0000168)

Histopath Description:

There is mild dilation of the lateral ventricles

Morphological Diagnosis:

Distribution: bilateral; **Severity:** mild;

Definitive Diagnosis:

Dilation of the brain ventricles

Histopathology Comments:

Mild dilation of the lateral ventricles is a background condition in mice of C57BL/6N background (Brayton et al., 2004).

Organ/Tissue Analyzed:

Histopathology examination included the following organs and tissues: brain, trigeminal ganglion, eyes, salivary glands, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, exocrine and endocrine pancreas, oesophagus, stomach, small intestine, large intestine, liver, gall bladder, spleen, kidneys, adrenal gland, lymph nodes, spinal cord, bone marrow, sternum, femur and tibia with associated skeletal

muscles, brown fat, pinna, skin, testis, epididymis, seminal vesicle, and prostate.

AnimalID: M00202442 (Male)

Histopathology Findings:

liver (MA:0000358)

Histopath Description:

lipidosis

Morphological Diagnosis:

Distribution: multifocal; **Severity:** mild;

Definitive Diagnosis:

Hepatic lipidosis

thymus (MA:0000142)

Histopath Description:

There is a 50 um diameter epithelial cyst.

Morphological Diagnosis:

Distribution: focal; **MPATH Diagnosis:** cyst MPATH:62

Definitive Diagnosis:

Epithelial cyst

Histopathology Comments:

This is a developmental abnormality commonly seen in mice.

tibia (MA:0001361)

Histopath Description:

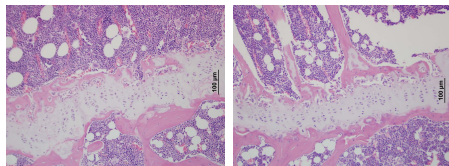
The tibial growth plate is slightly thin compared to WT control

Morphological Diagnosis:

Distribution: diffuse; **Severity:** mild;

Definitive Diagnosis:

Tibial growth plate hypoplasia



Tibia, WT_male,
growth plate,
normal, 20x, HE

Tibia, growth plate,
hypoplasia
(compare to WT),
20x, HE

Organ/Tissue Analyzed:

Histopathology examination included the following organs and tissues: brain, trigeminal ganglion, eyes, salivary glands, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, exocrine and endocrine pancreas, oesophagus, stomach, small intestine, large intestine, liver, gall bladder, spleen, kidneys, adrenal gland, lymph nodes, spinal cord, bone marrow, sternum, femur and tibia with associated skeletal muscles, brown fat, pinna, skin, testis, epididymis, seminal vesicle, and prostate.

Report Summary and Recommendation:

Mild growth plate hypoplasia is observed in three mice in this line. The lesion may explain the decreased length of long bones observed in this line. Other lesions are attributable to diet or strain background.

Line summary: Hypoplasia of tibial growth plate (3/4)