

HISTORIES FOR WEDNESDAY SLIDE CONFERENCE

1 October 1969

385
Case I - 1304326 Tissues from a mature male sentry dog. Clinically this dog had a palpable mass in the abdomen and a pendulous sheath.

Case II - P-134 A 4-month-old angus bull calf was treated with sulfa drugs for suspected salmonellosis. A fecal culture revealed only 386 E. coli. The calf responded, then relapsed and died.

Case III - P-100 Section from a mass removed from the rear leg of a 387 6-year-old dog.

CHARLES A MONTGOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

RESULTS OF WEDNESDAY SLIDE CONFERENCE
1 October 1969

355
Case I - 1504326 - The palpable mass in the abdomen of this adult sentry dog was a retained testicle containing a large Sertoli cell tumor. The animal demonstrated all major clinical signs associated with hyperestrogenism and there was severe squamous metaplasia of the prostate.

REF.: Brodey, R. S. and Martin, J. E.: Sertoli's Cell Neoplasm in the Dog. The Clinicopathological and Endocrinological Findings in Thirty-Seven Dogs. JAVMA, Vol. 133, p. 249-257, (1958).

Case II - P-134 - The morphologic diagnosis in this 4-month-old Angus calf was enteritis, focal, acute, mycotic, caused by Aspergillus sp. Numerous ulcers were observed in the mucosa of the small and large intestines. Fungal mucelia were present in the lesions. In addition, extensive fungal growth was evident in the trachea and air passages of the lungs. Respiratory lesions were characterized as acute necrotizing tracheitis and acute mycotic bronchopneumonia. Aspergillus sp. was cultured from the trachea and lungs.

REF.: Ainsworth, G. C. and Austwick, P.K.G.: Fungal Diseases of Animals (Chapt. 1, Aspergillosis). Rev. Series, No. 6, Commonwealth Bureau Animal Health, p. 1-13, (1959).

Case III - P-100 - The majority of the participants felt that this neoplasm from the rear leg of a 6-year-old cocker spaniel dog was a hemangiopericytoma. There was some concern over the high mitotic index in this tumor. The presence of an eosinophilic material throughout the neoplasm was confusing. This was interpreted by several to be osteoid, and discussion followed over the significance of osteoid in a tumor with this morphology. Some felt that this might be a metaplastic change as opposed to the neoplasm producing osteoid. Results of special stains and consultation will be forthcoming.

REF.: Yost, D. H. and Jones, T. C.: Hemangiopericytoma in the Dog. Amer. J. Vet. Res., Vol. 19, pp. 159-163, (1958).

Mills, J.H.L. and Nielsen, S. W.: Canine Haemangiopericytomas - A Survey of 200 Tumours. J. Small Anim. Pract., Vol. 8, pp. 599-604, (1967).

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

HISTORIES FOR WEDNESDAY SLIDE CONFERENCE

8 October 1969

~~Case I~~ ³⁹⁷ - 1771-18063 - An incidental finding in an aged bovine slaughtered in an Iowa abattoir.

~~Case II~~ ³⁹⁸ - 67P368 -- Tissue from a 5-year-old female German shepherd from Colorado. The dog had been limping on her left front leg for a month and a half. There was no history of an injury. There were denuded ulcerated areas on the foot over the phalanges and carpus.

~~Case III~~ ³⁹⁹ - 7148 - Tissue from an immature male rhesus monkey from a lot of approximately 130 monkeys. About 30 animals were sick at the time this animal died. At necropsy, white circumscribed lesions up to 1 cm in diameter were present throughout the lungs.

CHARLES A. MONTGOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

RESULTS OF WEDNESDAY SLIDE CONFERENCE

8 October 1969

~~397~~ 397
Case I - 1771 - 18063 - The diagnosis in this aged bovine was maduromycosis of the bovine nasal mucosa, or nasal granuloma. The animal was traced back to Oklahoma as the point of origin. Numerous chlamyospores and occasional budding hyphal structures could be demonstrated in the granulomatous reaction. Helminthosporium sp. is repeatedly isolated from this type of lesion in cattle.

Ref: Roberts, E. D. et al: Maduromycosis of the Bovine Nasal Mucosa. J. A. V. M. A., Vol. 142, No. 1, Jan. 1, 1963.

~~398~~ 398
Case II - 67P~~368~~ - This German shepherd dog from Colorado had lived in Arizona one year prior to her illness. The morphologic diagnoses were osteomyelitis with chronic granulomatous dermatitis, caused by Coccidioides immitis. The eye from this dog was on the slide conference in 1967 (slide-P-55).

Ref: Forbus, W. D.: Coccidioidomycosis: A Study of 95 Cases of the Disseminated Type With Special Reference to the Pathogenesis of the Disease. Military Surgeon, Vol. 99, pp. 653-719 (1946).

Note: I have enclosed a list of additional references submitted by the contributor.

Case III - 7148 - ³⁹⁹ The diagnosis in this Rhesus monkey was inhalation or foreign body pneumonia. Several participants described the lesion as a necrotizing pneumonia. The foreign body in this case was a diarrheal drug containing nitrofurazone, kaolin and pectin. The birefringent crystals present were primarily ground kaolin material. The animal died approximately 72 hours after treatment. There was some concern whether this severe a lesion could occur in that length of time. Similar lesions were produced in mice given the same product via intranasal route. The necrotizing process was believed to be the result of the acid pH of the pectin component of the drug.

CHARLES A. MONTGOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

REFERENCES

1. Maddy, K. T.: Disseminated Coccidioidomycosis of the Dog. *JAVMA*. 128:483-489 (1958).
2. Straub, M. and Schwarz, J.: Coccidioidomycotic Thoracic Lesions in Dogs in Tuscon, Ariz., A.M.A. *Arch. Path.* 62:479-488 (1956).
3. Converse, J. and Reed, R.: Experimental Epidemiology of Coccidioidomycosis. *Bact. Rev.* 30:678-695 (1966).
4. Cello, R.: Ocular Manifestations of Coccidioidomycosis in a Dog. *Arch. Ophthalmol.* 64:117-123 (1960).
5. DeMartini, J. and Riddle, W.: Disseminated Coccidioidomycosis in Two Horses and a Pony. *JAVMA*. 155:149-156 (1969).

Histories for Wednesday Slide Conference

15 October 1969

388
Case I - X742 - A large, mature, black, tomcat was presented for examination because of a wound on the back that had not healed properly. A one centimeter nodule was detected on the dorsal surface of the body just behind the shoulders and was surgically removed. Your diagnosis?

389
Case II - 46-630 - Incidental finding at necropsy in a rhesus monkey.

390
Case III - 69276-9 - Intestine of an aged pony inoculated with infectious serum. Following a temperature of 105°F for four days and severe depression, the animal was euthanized and necropsied on the sixth postinoculation day.

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

RESULTS OF WEDNESDAY SLIDE CONFERENCE

15 October 1969

388
Case 1 - X742 - Mast Cell Tumor was the diagnosis on the skin tumor removed from the back of a mature male cat. Diagnoses which were considered were basal cell tumor, histiocytoma, and mast cell tumor. The Giemsa stained section demonstrated orthochromatic granules within the cytoplasm of the neoplastic cells. Dr. Bernard Zook briefly discussed mastocytosis of the cat. An enlarged mottled spleen and liver is often described as characteristic. Ulcers of gastric and duodenal mucosa have also been associated with feline mastocytosis.

A recent National Cancer Institute Monograph was discussed and described as an excellent reference. (See below #1). For those who expressed an interest, this can be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. The price is \$5.50.

Ref: 1. Nielsen, S. W.: "Spontaneous Hematopoietic Neoplasms of the Domestic Cat." In: "Comparative Morphology of Hematopoietic Neoplasms." Ed. Lingeman, C. H. and Garner, F. M., National Cancer Institute Monograph 32: 73-94, 1969.

2. Meir, H.: "Feline Mastocytoma: Two Cases." Cornell Vet. 47: 220-226, 1957.

387
Case II - 46 - 650 - The parasites located in the epithelium of the tongue from a rhesus monkey were identified as Gongylonema sp. It was pointed out that features of this nematode are the thick cuticle, the prominent lateral cord cells on one side only, and the high coelomyarian musculature. It was also mentioned that this species of parasite is frequently encountered in the porcine tongue and in the chicken.

390
Case III - 69276 - 9 - The aged pony had been inoculated with the virus of equine arteritis. The morphologic diagnoses was necrotizing vasculitis which had resulted in edema and hemorrhage primarily of the submucosa of the small intestine. During the discussion several differential diagnoses were considered which included equine viral arteritis, equine viral abortion, acute colibacillosis or shigellosis, Arthus phenomenon, purpura hemorrhagica, and equine infectious anemia.

Ref: 1. Doll, E. R., Bryans, J. T., McCallum, W. H., and Crowe, M. E. W.: "Isolation of a filterable agent causing arteritis of horses and abortion by mares. Its differentiation from the equine abortion (influenza) virus." Cornell Vet. 47: 3-41, 1957.

2. Jones, T. C., Doll, E. R., Bryans, J. T.: "The lesions of equine viral arteritis." Cornell Vet. 47: 52-68, 1957.

LESTER W. SCHWARTZ
CPT, VC, USAR
Veterinary Pathology Division



Histories for Wednesday Slide Conference
22 October 1969

371 Case I - 3031 - Lung from an 8-year-old male German shepherd dog, that also had lymphosarcoma. The dog had not been treated for either condition.

392 Case II - 00149 - Incidental finding at slaughter in a young bovine.

393 Case III - 69-365 F4 - This tissue is from one of a flock of ghostly pearl chickens 53 weeks of age. The flock was purchased for egg production when 24 weeks old. Many culls were present.

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

RESULTS OF WEDNESDAY SLIDE CONFERENCE

22 October 1969

Case I - ³⁹¹ 3031 - Lung - The primary diagnosis in this 8-year-old German shepherd dog was endarteritis. Numerous microfilariae of *Dirofilaria immitis* were present throughout the lung. One dead adult parasite was present in the section. The villous or rugose endarterial fibrosis present was characteristic of this disease entity.

Ref: Adcock, Jerry L.: Pulmonary Arterial Lesions in Canine Dirofilariasis. Am. J. Vet. Res., Vol. 22, No. 89, July 1961, pp. 655-6

Case II - ³⁹² 00149 - This bovine lung contained the parasitic cyst of *cysticercosis*. The contributor demonstrated a liver section containing an unarmed scolex adjacent to a cyst. Heart lesions were also present. Some participants considered sparginosi in their differential diagnosis. The contributor (M. I. D.) pointed out that there is often a paucity of eosinophils associated with the lesions of *cysticercosis*.

Case III - ³⁹³ 69 - 365 F4 - The diagnosis in the eye of this ghostly pearl chicken was *myelocytomatosis* of the choroid and ciliary body and lymphoid leukosis of the periocular tissues. *Myelocytomatosis* was also present in the liver of this bird.

Ref: Helmboldt, C. F. and T. N. Fredrickson: The Avian Leukosis Complex. (Comparative Morphology of Hematopoietic Neoplasms). National Cancer Institute Monograph No. 32, August 1969.

CHARLES A. MONTCOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

5

Histories for Wednesday Slide Conference
29 October 1969

374
Case I - 69-1825 - Lung from a one day old foal. This foal was one of two to die within 36 hours after parturition. Two other foals on the same farm were clinically normal.

Case II ³⁷⁵ 18518 - Tissue from a 10-month-old male domestic short-haired cat with a history of cyanosis, dyspnea, fever, and dehydration for one week duration prior to death.

Case III ³⁷⁶ 14,082 - Section of small intestine from a pig. Morphologic diagnosis please.

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

RESULTS OF WEDNESDAY SLIDE CONFERENCE

29 October 1969

394

CASE I - 69 - 1825 - This foal had equine viral rhinopneumonitis. The lung was markedly congested and hemorrhagic. The bronchiolar epithelium was degenerative with the lumen containing cellular debris in some cases. Eosinophilic intranuclear inclusions were present in bronchiolar epithelial cells. The majority of the 20 mare herd had a mild respiratory condition three months prior to birth of the two foals that died. The references by Doll and Jones et al given last week discuss the differential diagnosis and lesions in the fetus caused by this disease and equine viral arteritis.

395

CASE II - 18518 - This 10-month-old domestic cat had feline pneumonitis. Several people considered toxoplasmosis in their differential diagnosis. The epithelization and pulmonary adenomatosis observed was thought by some to be very compatible with the lesions of chronic oxygen toxicity.

Ref: Omar, A. R., The Characteristic Cells of the Lung and Their Reaction to Injury. Vet. Bulletin, Vol. 34, No. 7, July 1964, pp. 371-443.

396
CASE III - 14082 - This pig had intestinal emphysema. The cyst-like structures contained air, and were considered to be dilated lymphatics. The condition has been reported in horses, rabbits, poultry, swine, cattle and man.

- Ref: 1 Cohrs, P.: Textbook of the Special Pathological Anatomy of Domestic Animals. First English Ed., 1967. Pergamon Press, London, p. 416.
2. Smith, H. A. and Jones, T. C. Veterinary Pathology, 3rd Edition, 1966, Lea and Febiger, Philadelphia, p. 934 (illustration only).
3. Smith, B. H. et al: Pneumatosis Intestinalis. The Amer. Jour. of Clin. Path., Vol. 48, No. 5, Nov. 1967, pp. 455-465.

CHARLES A. MONTGOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

6

Histories for Wednesday Slide Conference
5 November 1969

Case I - ⁴⁰⁰5 - Tissue from a 4-week-old, Pilch-Hubbard chicken. At the time of submission, 150 in the flock of 6,500 had died. The birds had received bacitracin in water for two or three days followed by sulfaguinoxaline. Amprol was being used as a coccidiostat. The birds were kept on the floor and no history of vaccinations was given. Clinically, the birds exhibited signs of chills and lameness.

Case II - ⁴⁰¹220 - Tissue from an adult owl monkey (Aotus trivirgatus).

Case III - ⁴⁰²AN-41-65 - Tissue from an experimental mammal.

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
5 November 1969

Case I - 5 - ⁴⁰⁰ The Pilch-Hubbard chicken had avian encephalomalacia or hypovitaminosis-E. Newcastle and avian encephalomyelitis were considered in the differential diagnosis, but most participants felt the distribution of the lesion and lack of cellular reaction was characteristic of encephalomalacia.

Case II - 220 - ⁴⁰¹ The owl monkey had received intravenously 0.1 ml of 10^{-2} dilution of a Herpes virus hominis culture (virus titer 10^7 TCID₅₀). Seven days later, the animal was found moribund and was killed for autopsy. The lesions of Herpes-T and Herpes simplex in the owl monkey are indistinguishable and virus isolation is necessary for differentiation.

References:

- Katzin, D. S., Connor, J. D., Wilson, L. A., and Sexton, R. S.: Experimental herpes simplex infection in the owl monkey. Proc. Soc. Exp. Biol. Med., 125: 391-398, 1967.
- Melendez, L. V., Espana, C., Hunt, R. D., Daniel, M. D. and Garcia, F. G.: Natural herpes simplex infection in owl monkey (Aotus trivirgatus). Lab. An. Care, 19: 38-45, 1969.
- Hunt, R. D. and Melendez, L. V.: Herpes virus infections of non-human primates: A review. Lab. An. Care, 19: 221-234, 1969.

Case III - AN-41-65 - ⁴⁰² The experimental mammal in this case was a jerboa, a small Middle-East rodent. The necrosis and hemorrhage in the liver, lung, and lymph node was caused by the protozoan parasite, Hepatozoon belfouri. Schizonts and merozoites were present throughout the liver. Merozoites were also discernible in the lymph node and lung.

Reference:

- Furman, Deane P.: Hepatozoon belfouri: Sporogenic cycle, pathogenesis and transmission by mites to jerboa hosts. J. of Parasitology, Vol. 52, No. 2, April 1966, p. 373-382.

NOTE: No conference 12 or 26 November.

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

(7)

HISTORIES FOR WEDNESDAY SLIDE CONFERENCE

19 November 1969

⁴⁰³
CASE I - 37 - A - Lung from a twenty-year-old Arabian mare with a clinical history of respiratory disease. Morphologic diagnosis please.

⁴⁰⁴
CASE II - A - 00061 - Tissue from a seven-month-old, male German Shepherd dog presented with posterior paresis. Clinically, the paresis was ascending and worsened over a week's duration. Morphologic and etiologic diagnoses please.

⁴⁰⁵
CASE III - J 16047 - What is your morphologic diagnosis in this porcine lung? Give possible etiologic agents.

⁴⁰⁶
CASE IV - 67 - 886 - One of many brownish nodules found attached to the diaphragm of a 6-9 month old Barrow sent to slaughter.

CHARLES A. MONTGOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

RESULTS OF WEDNESDAY SLIDE CONFERENCE

19 November 1969

⁴⁰³
CASE I - 37A - The majority of those attending the conference gave a morphologic diagnosis of chronic interstitial pneumonia on the lung from the aged Arabian mare. A discussion followed as to the use of the words adenomatosis or adenomatoid to describe the change. The contributors' diagnosis was pulmonary adenomatosis. An etiologic agent was not determined, however, mention was made of finding an occasional intranuclear inclusion body.

⁴⁰⁴
CASE II - 00061 - The morphologic diagnosis on the spinal cord from the male German Shepherd dog was a focal demyelinating myelitis. Eosinophilic intranuclear inclusion bodies were present in glial cells compatible with those of the canine distemper virus. Additional clinical signs were increased irritability and tremors of the head and jaws. Hematologic studies revealed a total white blood count of 8,950 with 80% neutrophils, 2% eosinophils, 8% lymphocytes, and 10% monocytes.

405
CASE III - J16047 - The morphologic diagnosis on the porcine lung was verminous pneumonia. The two primary etiologic agents discussed were metastrongylus sp. and ascaris sp. The presence of bilateral alae and large bilateral cord cells in these larvae along with the absence of adult nematodes support classifying these larvae as ascarid species.

Ref: Mackenzie, A.: The Pathology of Respiratory Infections in Pigs. Brit. Vet. Jnl. 125: 294-303, 1969.

406
CASE IV - 67 - 886 - The nodules found attached to the diaphragm in this barrow were identified as heterotopic testicular tissue.

Ref: Todd, G. C.; Nelson, L. W.; Migaki, G.: Multiple Heterotopic Testicular Tissue in the Pig. A Report of Seven Cases. Cornell Vet., Vol. 57, No. 4, Oct. 1968.

NOTE: No conference 26 November 1969.

LESTER W. SCHWARTZ
CPT, VC, USA
Veterinary Pathology Division

8

HISTORIES FOR WEDNESDAY SLIDE CONFERENCE

3 December 1969

⁴⁰⁷
CASE I - 1303207 - This military police dog was presented for euthanasia with a chronic debilitating disease. Clinical signs were first noticed seven months previous, i.e. swelling in laryngeal region and elevated total white blood count. At necropsy a tumor occupying the thoracic cavity, approximately 100 g in weight and a large 200 g tumor mass was encountered.

⁴⁰⁸
CASE II - DBA - ... in a 10-week-old DBA/2J strain control mouse at necropsy. Morphologic diagnosis?

⁴⁰⁹
CASE III - 2900 - Tissue from an untreated 18-month-old Long-Evans rat. The terminal clinical signs were marked ascites, emaciation and general malaise. To date about 3% of the animals in this colony have undergone a similar syndrome. Morphologic diagnosis?

410
CASE IV - P-130 - Tissue from an 8-month-old Spitz bitch ill for
4-5 months with signs including bleeding from the gums, anemia,
listlessness and loose stool. Additionally the animal developed a
distended abdomen and limb tenderness, occasionally vomited and had
coughing spells. During the final month of illness, its temperature was
about 104^o F. and its white blood cell count varied between 17,000 and
24,000. Your diagnosis please!

CHARLES A. MONTGOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

Results of Wednesday Slide Conference
3 December 1969

- Case I - ⁴⁰⁷1303207 - The tumorous mass in the thoracic cavity of this dog was a thymoma.
- Ref: Lattes, Raffaele. Thymoma and Other Tumors of the Thymus, An Analysis of 107 Cases. Cancer, Vol. 15, pp. 1224-1260, 1962
- Case II - ⁴⁰⁸DBA - This was a case of spontaneous calcification in the heart of a DBA mouse. The lesion is restricted to the right ventricle. 94% of DBA mice older than 90 days have this lesion.
- Ref: Nabors, Charles E. and Carroll R. Ball. Spontaneous Calcification in Hearts of DBA Mice. The Anatomical Record, Vol. 164, No. 2, June 1969, pp. 153-162.
- Case III - ⁴⁰⁹2900 - The morphologic diagnosis in this Long-Evans Rat was Lymphoblastic Lymphosarcoma. There was also enlargement of the mesenteric and tracheo bronchial lymph nodes with the spleen being of normal size. The ileocecal region is most often involved.
- Ref: Childress, Joe R., Ward, Billy C. and Shively, James N.: Spontaneous Lymphosarcoma in a Colony of Long-Evans Rats. Abstracts, Amer. Assoc. Lab. Ani. Care 37, 1969.
- Kihlstrum, J.M. and Clements, G.R.: Spontaneous Pathologic Findings in Long-Evans Rats. Lab. Ani. Care 19:710, 1969.
- McEven, C. S.: The Occurrence of Lymphosarcoma in Rats. Amer. J. Cancer 36:383, 1939.
- Case IV - ⁴¹⁰This hypercellular bone marrow contained macrophages with Histoplasma capsulatum in their cytoplasm. The dog had disseminated histoplasmosis. Organisms were present in large numbers in the spleen, liver, and lungs as well as bone marrow and a few organisms were identified in the kidneys.
- Ref: Robinson, V.B. and McVickar, D.L. Pathology of Spontaneous Canine Histoplasmosis. A Study of Twenty-one Cases. Amer. J. Vet. Res. Vol 13: 214-219 (1952).

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

Historics for Wednesday Slide Conference
10 December 1969

- Case I - ⁴¹¹6347 - Tissue from an experimental rabbit. Morphologic diagnosis?
- Case II - ⁴¹²1354-66 - Incidental finding at post mortem in an adult male angora goat.
- Case III - ⁴¹³69-1099 - Tissue from a 6-week-old rabbit that died following a short period of profuse diarrhea.

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
16 December 1969

Case I - 411 - The morphologic diagnosis on this rabbit was cortical infarct of the adrenal. The animal was given ACTH followed by E. coli 3 hours later. The animal was sacrificed 26 hours later. Discussion followed on the pathogenesis of generalized Shwartzman reaction. Thrombi were not present in this case but several participants speculated that GSR induced the adrenal lesion.

Ref.: Horn, R. G., et al: Studies on the Pathogenesis of the Generalized Shwartzman Reaction. The Role of Granulocytes. Lab. Invest., Vol. 18, No. 2, p. 101, 1968.

Horn, R. G., et al: Fragmentation of Granulocytes in Pulmonary Capillaries During Development of the Generalized Shwartzman Reaction. Lab. Invest Vol. 19, No. 3, p. 451, 1968.

Case II - 412 - 1354-66 - The brown pigment associated with basement membranes of proximal convoluted tubules of this angora goat is the unusual "Cloisonné kidney" described by Light, Thompson, and others. The material is best demonstrated on PAS stained slides. It is calcium and iron negative. Complete histochemical studies have been performed on the material but the precise cause of the condition is not known.

Ref.: Light, F. W., Jr.: Pigmented Thickening of the Basement Membranes of the Renal Tubules of the Goat ("Cloisonné Kidney"). Lab. Invest., Vol. 9, No. 2, 1960.

Thompson, S. W., et al: Some Histochemical Studies of "Cloisonné Kidney" in the Male Angora Goat. Amer. J. Vet. Res., July, 1961

Case III - 415 - 69-1099 - This 6-week-old rabbit died of Tyzzer's disease. The morphologic diagnosis was acute necrotizing hemorrhagic enteritis. The intracellular bacilli could best be seen in the lesser affected portion of large intestine on the slide.

Ref.: Allen, A. M.: Tyzzer's Disease Syndrome in Laboratory Rabbits. Amer. J. Path., Vol 46, No. 5, May 1965. ✓

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

(D)

Histories for Wednesday Slide Conference
7 January 1970

Case I - ⁴¹⁴69945-1 - One of several seals in an aquarium that developed large ulcerative lesions on their skin. Your morphologic and etiologic diagnosis please.

Case II - ⁴¹⁵66P-637 - Tissues from a 6-year-old spayed female, mixed Labrador dog. The dog died with severe pneumonic signs. What is your morphologic diagnosis? Etiology?

Case III - ⁴¹⁶1311540 - An incidental finding at slaughter in a porcine. Morphologic diagnosis?

Bonus - ⁴¹⁷1311642 - Another incidental finding found at slaughter in a hog. Compare this lesion with that in Case III.

CHARLES A. MONTGOMERY, JR.
CDT, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference

7 January 1970

- Case I - 69545-1 - ²⁰²¹Seal pox. This case was described by the contributor in the reference cited below. The eosinophilic intracytoplasmic inclusions
✓ seen within the proliferative epithelial lesions were weakly positive with Feulgen staining and negative with periodic acid-Schiff.
Ref.: Wilson, T., Cheville, N., and Karstad, L.: Seal pox.
Bull. Wildlife Dis. Assoc., Vol. 5, Oct. 69.
- Case II - 66P-637 - ²¹¹Disseminated Geotrichosis in a dog. This case was described by the contributor in the reference cited below. In
hematoxylin and eosin stained sections, the organisms appeared as clear, rounded cytoplasmic vacuoles with a small basophilic inner
body, an appearance suggestive of Histoplasma capsulatum. Fungal
✓ structure was clearly demonstrated by Gomori's methenamine silver technique (slide to be forwarded with conference slides for 21 January). Predominate forms were round to ovoid, yeast-like cells, 3-7 u in diameter.
Ref.: Lincoln, S. D., and Adcock, J. L.: Disseminated Geotrichosis in a Dog. Path. Vet., Vol. 5, 282-289, 1968.
- Case III - 1311540 - ²¹¹Adenomatous intestinal hyperplasia in a pig.
✓ Ref.: Dodd, D. C.: Adenomatous Intestinal Hyperplasia (Proliferative Ileitis) of Swine. Path. Vet., Vol. 5., 333-341, 1968.
- Bonus - 1311642 - ⁴⁹⁵Muscular hypertrophy of the ileum in a pig.
Ref.: Nielsen, S. W.: Muscular Hypertrophy of the Ileum in Relation to "Terminal Ileitis" in Pigs. JAVMA, Vol. 127, 437-441, 1955.

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

(11)

Histories for Wednesday Slide Conference
14 January 1970

Case I - ⁴¹⁸2612 - Tissues from a mature male cat found dead in animal colony.

Case II - ⁴¹⁹69-155 - Tissues from a 4 cm., firm, circumscribed, expanding mass on the medial aspect of the gingiva adjacent to the first premolar of a 12-year-old, castrated male, pointer-setter dog.

Case III - ⁴²⁰12-245 - Tissues from a mourning dove (Zenaidura macroura) which was one of 3 presented from a huge die-off that occurred in April 1968 near Scottsdale, Arizona. Doves and other wild birds were being fed as much as 1,000 lbs. of milo per week by a kind-hearted person where the outbreak took place.

Both live and dead birds were observed to have unswallowed grain in the posterior oral cavity. A biologist doing research on the disease noted that affected doves would pick up grain, try to swallow, then drop it. Some such grain was proved contaminated with the causative organism by culture, and other birds were seen picking up grain dropped by birds with the swallowing difficulty.

Live affected birds presented no unusual outward signs other than weakness, palpable loss of normal breast contour and an indefinable swelling in the upper throat. Grain was wedged in the posterior pharynx, and in some, it was possible to see pharyngeal necrosis.

On necropsy, the pharynx and upper esophagus of all 3 doves contained firm, nodular, white lesions about 0.7 cm. in diameter that produced a definite enlargement below the mandible. There was a 4 mm. focus of soft white mucosal exudate and necrosis extending through the crop horizontal ramus of the mandible through the trachea and posterior pharynx.

CHARLES A. MONTGOMERY, JR.
CPT, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference

14 January 1970

✓ 418
Case I - 2612 - *Aelurostrongylus abstrusus* infestation with medial hypertrophy of the arterioles in the lung of a cat.

Ref.: Hamilton, J. M.: Pulmonary Arterial Disease in the Cat. J. Comp. Path., Vol. 76, 133, 1966.

Hamilton, J. M.: Experimental Lungworm Disease of the Cat. Association of the condition with lesions of the pulmonary arteries. J. Comp. Path., Vol. 76, 147, 1966.

✓ 419
Case II - 69-555 - Gingival malignancy without metastasis in a dog.

Opinions of participants present:

- Fibrosarcoma - 7
- Melanoma (amelanotic) - 3
- Spindle cell tumor - 2
- Undifferentiated - 1
- Rhabdomyosarcoma - 1
- Squamous cell carcinoma - 1

420
Case III - 12-245 - Trichomoniasis in a mourning dove, due to Trichomonas gallinae (confirmed by culture). The organisms were identified with some difficulty at the periphery of the lesion. Their pear shape was apparent, but flagella, axostyles, and other structures were rarely identifiable. Vacuoles and coarse basophilic granules were noted in the cytoplasm.

Ref.: Mesa, G. P., Stabler, R. M., and Berthrong, M.: Histopathological Changes in the Domestic Pigeon Infected with Trichomonas gallinae. Avian Dis., Vol. 5, Feb. 1961.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Histories for Wednesday Slide Conference
21 January 1970

- Case I - ²⁹⁵¹294A - Tissues from an adult Macaca mulatta taken at the time of an exploratory laparotomy for a palpable abdominal mass, cystic ovary and an enlarged, hard, cigar-shaped uterus.
- Case II - ⁴¹⁹¹818-69 - Tissues from either of two of a lot of ten Charles River rats kept off experiment because of acute pneumonia.
- Case III - ⁴¹⁵Tissues from a 4-1/2-year-old female lowland gorilla which had resided in the Birmingham Zoo for approximately 1 year. The animal died after an illness of 5 days during which major symptoms were diarrhea and dehydration. Shigellosis or salmonellosis was suspected but was not confirmed by standard cultures. On the 5th day of illness, laboratory data were: serum alkaline phosphatase 7.0 Bodansky units, serum phosphate 7.9, SGOT 410, and total bilirubin 3.1 (direct 1.6).

During the one week of illness the animal was given the following: neomycin, Neospectate, Compazine, Chloromycetin, Thiabendazole, Ringer's solution, Kantrex, and Thorazine.

At autopsy there was moderate acute colitis, perhaps related to the prolonged antibiotic therapy or secondary to debility. The colonic wall had a few abscesses due to Balantidium coli. The major finding was the liver lesion.

66-637 ^{415B} GMS of disseminated geotrichosis seen on 7 January slide conference.

CHARLES A. MONTGOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

Results of Wednesday Slide Conference
21 January 1970

- I - 794A - ⁴²¹ Endometriosis in a Macaca mulatta.
Ref.: Klaver, H., Bartelmez, G. W.: Endometriosis in a Rhesus
Monkey. Surg., Gynecology, and Obstetrics, Vol. 92,
650-660, 1957.
- II - 819 - ⁴²⁹ Nosema cuniculi encephalitis and chronic mild otitis media in a
rat. Pseudocysts were not seen on all slides. Chronic otitis media
was present on only a few slides.
Ref.: Petri, M.: Studies on Nosema cuniculi. ACTA Pathologica et
Microbiologica Scandinavica, Supplementum, 204, 1969.
Innes and Saunders, Comparative Neuropathology, 487.
Olsen and McCune, Histopathology of Otitis Media in the
Rat. Lab. Anim. Care, Vol. 18, No. 4, 1968.
- III - 3 - ⁴⁹³ Submassive hepatic necrosis in a gorilla, etiology undetermined.
Interpretation of the histologic picture caused considerable discussion
among the participants present. All agreed there is certainly a sub-
massive necrosis present, portions of the liver have completely
dropped out. Ghost lobules can be made out showing efferent veins
which are distended but usually empty. These lobules are made up
of mesenchymal cell elements and no hepatocytes are recognized.
Whether these mesenchymal cells are inflammatory cells or residual
reticulum was argued, but not resolved. Some interpreted the acinar
structures seen in former portal areas as biliary duct proliferation,
others saw them as representing pseudoductular regenerative
activity. One participant suggested these were simply surviving
clusters of parenchymal cells. Areas of massive parenchymal necrosis
are well defined and alternate with areas of fairly well preserved
lobules showing central fatty change and congestion. Many bile
canaliculi show retention of bile and some of the Kupffer cells contain
bile particles. The portal stroma is moderately infiltrated with small
round cells.
Consultations from Hans Popper, M.D., Edward A. Gall, M.D., and
Hans F. Smetana, M.D. were submitted by the contributor. Drs.
Gall and Popper considered this to be an infectious form of hepatitis.
Dr. Popper said "The liver looks no different from what we see in
viral hepatitis of man of the so-called acute massive necrotic type.
Dr. Smetana's interpretation was somewhat different, he said "There
is no evidence of any inflammatory process, specific, or otherwise,
no parasites or ova are recognized. The histologic picture is not
consistent with that of viral hepatitis, which is more diffuse and
is accompanied by regeneration of hepatocytes. The speculation
concerning the pathogenesis of the lesion centers about a vascular
origin of an infarct character perhaps, following obstruction of
branches of arterial(?) vessels, which, however, is not evident in
these sections." Dr. K. G. Ishak, Chief, Hepatic Branch, AFIP

was in essential agreement with Dr. Smetana. All consultants mentioned the possibility of drug reaction.

The opinions of the participants present were:

- Toxic hepatitis - 6
- Hepatic necrosis with biliary hyperplasia - 4
- Hepatic infarct - 1
- Viral hepatitis - 4

The contributor's diagnosis was: Submassive hepatic necrosis (possibly viral hepatitis).

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Histories for Wednesday Slide Conference
28 January 1970

- Case I - ⁴⁹⁻⁴⁴69-2624 (2 slides, normal and affected) - Tissue from an adult springer spaniel bitch. Clinically, the animal's skin was hyper-elastic, flaccid, and covered with scars. The owner complained about how easily tears could be induced in the animal's skin.
- Case II - ⁴⁹⁻⁵68276 - Tissue from a 3-week-old SPF pig which had signs of weakness, ataxia, and quadrilateral paresis. The temperature was 103-104°F. Five of 12 pigs in the litter were similarly affected.
- Case III - ²⁵S-63 - Tissue from a 6-year-old, cocker spaniel bitch weighing 15 kg. presented with gross hematuria of several month's duration. A pneumocystogram revealed several "stones". A cystotomy was performed and several growths of varying size were removed surgically from the fundus of the bladder. These nodules were polypoid and pedunculated.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
28 January 1970

✓ Case I - 69-2524⁴²⁴ - Cutaneous asthenia in a springer spaniel bitch. Significant, if not dramatic, histologic changes are observed in the dermis. The lesion is characterized by a lack of uniformity of size and orientation of collagen bundles. Shattering and disorganization are apparent in some collagen bundles.

Ref.: Hegreberg, G. A., Padgett, G. A., Henson, J. B., and Ott, R. L.: Cutaneous asthenia in dogs. 16th. Gaines Veterinary Symposium, 1966.

✓ Case II - 68276⁴²⁵ - Polioencephalomyelitis in a pig.

Ref.: Holman, J. E., Koestner, A., and Kasza, L.: Histopathogenesis of Porcine Polioencephalomyelitis in the Germ-Free Pig. Path. vet. 6: 633-651, 1966.

Beran, G. W., Werder, A. A., and Wenner, H. A.: Enteroviruses of Swine. I. Their Recognition, Identification, and Distribution in a Herd of Swine. Am. J. Vet. Res., July 1958.

Wenner, H. A., Beran, G. W., and Werder, A. A.: Enteroviruses of Swine. II. Studies on the Natural History of Infection and Immunity. Am. J. Vet. Res., November 1960.

✓ Case III - S-63⁴²⁶ - Polyploid growth in the bladder of a dog. Opinions of the participants present were:

- Transitional Cell Papilloma - 16
- Hemorrhagic Papilloma - 2
- Squamous Metaplasia with Hemorrhage - 1
- Angioma - 1
- Hemangioma - 1

The contributor's diagnosis was: Transitional Cell Papilloma.

Ref.: Osborne, C. A., Low, D. G., Perman, V, Barnes, D. M.: Neoplasms of the Canine and Feline Urinary Bladder: Incidence, Etiologic Factors, Occurrence and Pathologic Features. Am. J. Vet. Res., October 1968.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Histories for Wednesday Slide Conference

4 February 1970

427

Case I - 239 A - Tissue from a firm, nodular mass, 4x2 cm., arising from the gingiva of a 12-year-old cocker spaniel bitch.

428

Case II - P 135 - Tissue from a 3-day-old pig. This animal and its littermates were normal at birth but became ill and died by the 3rd post natal day.

421

Case III - 2944 - Tissues from a 4-month-old irradiated pig.

422

Case IV - LS -10 -69 - Section of tissue surgically excised from the neck of a Rhodesian Ridgeback pup. Clinically, the animal was showing opisthotonos and occasional convulsions.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
4 February 1970

427
Case I - 259A - Nodular growth from the gingiva of a 12-year-old cocker spaniel bitch. Opinions of the participants present were:

Gingiva hyperplasia - 5
"Prickle cell" carcinoma - 2
Papilloma - 1
Adamantinoma - 2
Basal cell carcinoma with "Prickle cell" differentiation - 1
Epidermoid carcinoma - 1

R. Boyers, Chief, Dental and Oral Pathology Division, AFIP, called this lesion a papilloma with no evidence of dysplasia. The contributor's diagnosis was: "Prickle cell" carcinoma. The contributor has collected tissue from 13 such growths over the past several years. Clinically, all lesions appeared to arise from the gingiva and were generally characterized by slow growth and recurrence following excision. Morphologically, all 13 cases were similar showing deep down growths and nests of epithelium containing prominent intercellular bridges. Lysis of bone was seen in several cases and in one case regional lymph node metastasis was observed. With these exceptions characteristic features of malignancy were not observed.

428
Case II - P135 - Transmissible gastroenteritis in a 3-day-old pig
Ref.: Doyle, L. P. and Hutchings, L. M.: A Transmissible Gastroenteritis in Pigs. J. Amer. Vet. Med. Assoc. 108: 257-259 (1946).
Haelterman, E. O. and Hooper, B. E.: Transmissible Gastroenteritis of Swine as a Model for the Study of Enteric Disease. Gastroenterology 53: 109-113 (1967).
Thake, D. C.: Jejunal Epithelium in Transmissible Gastroenteritis of Swine. An Electron Microscopic and Histochemical Study. Amer. J. Path. 53: 149-168 (1968).

429
Case III - 2944 - Stephanuriasis in a 4-month-old pig.

430
Case IV - LS-10-69 - Congenital dermoid sinus in a Rhodesian ridgeback pup.
Ref.: Mann, G. E. and Stratton, J.: Dermoid Sinus in the Rhodesian Ridgeback. J. small anim. Pract. Vol. 7, 1966, 631-642.
Lord, L. H., Cawley, A. J. and Gilray, J.: Mid-Dorsal Dermoid Sinuses in Rhodesian Ridgeback Dogs - A Case Report. J. Amer. Vet. Med. Assoc. Dec. 1, 1957.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Histories for Wednesday Slide Conference
11 February 1970

431
Case I - 6959 - Tissue from a 15-year-old male poodle. The neoplasm involved much of the orbital fossa and was present for 5 years. Intra-ocular involvement was not evident at gross examination or when the eye was examined microscopically.

432
Case II - 779-6947 - Tissue from one of two male falcons that became ill, had respiratory distress and rapid weight loss prior to death.

433
Case III - 7105 (2 slides) - Tissue from a 9-year-old dog with respiratory difficulty. The dog had spent its entire life near the Chihuahua desert in the Rio Grande Valley of New Mexico.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
11 February 1970

Case I - ⁴³¹6459 - Neoplasm from the orbit of a 15-year-old male poodle.
Opinions of the participants present were:

Adenocarcinoma - 10

Adenoma - 4

Meningoma - 1

Eleven of 15 participants thought the tumor was of lacrimal gland origin.
The contributor's diagnosis was: Mixed tumor of lacrimal gland origin.

Ref.: Hogan and Zimmerman: Ophthalmic Pathology, 2nd. edition, pp. 758.

Request for consultation has been forwarded to L. E. Zimmerman, Chief,
Ophthalmic Pathology Branch, AFIP. His opinion will be relayed to you
in the near future.

Case II - ⁴³²779-6947 - Pulmonary aspergillosis in a tercel (Falco mexicanus).

Case III - ⁴³³7103 (2 slides) - ^{ADD} Bronchiolar carcinoma and chronic interstitial
nephritis in a 9-year-old dog. Clinically, the animal was showing respiratory
difficulty and coughing. Urine examination revealed protein +++, sugar and
blood. A diagnosis of bronchitis and chronic interstitial nephritis was
rendered and the dog treated symptomatically with antitussives and ex-
pectorants. The cough responded moderately to therapy but the dyspnea
progressively worsened. Two months later, the dog was again presented
to the examining veterinarian and a chest x-ray taken. Coarse nodular
densities were visualized throughout both lung fields and the possibility of a
neoplastic process strongly considered. The animal was euthanized one
month later and necropsied. Grossly, the lungs were diffusely consolidated
with multiple white nodules. The kidney was hard, white and shrunken with
small cysts at the corticomedullary junction.

Ref.: Nielsen, S. W. and Horana, A.: Primary Pulmonary Tumors of the
Dog. A Report of Sixteen Cases. Amer. J. Vet. Res., 21, pp. 813-830.

Bennett, D. E. and Sasser, W. F.: Bronchiolar Carcinoma, A Valid
Clinicopathologic Entity. Cancer, 24: 876-887, (1969).

Watson, W. L. and Farpour, A.: Terminal Bronchiols or "Alveolar
Cell" Carcinoma of the Lung. (265 cases) Cancer, 19: 776-780,
(1969).

Brodey, R. S. and Craig, P. H.: Primary Pulmonary Neoplasm in the
Dog: A Review of 29 Cases. JAVMA, 147: 1628-1643.

Purohit, B. L. and Sardeshpande, P. D.: Canine Pulmonary Neoplasms.
The Indian Vet. Journal, 44: 558-563.

Osborne, C. D. et al.: Reversible Versus Irreversible Renal Disease
in the Dog. JAVMA, 155: 2062-2078, (1969).

Anderson, L. J.: The Glomeruli in Canine Interstitial Nephritis. J. Path.
Bact. 95: 59-65, (1968).

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Histories for Wednesday Slide Conference
18 February 1970

Case I - ⁴³⁴ 18521-1 - Tissue from a 10-year-old poodle bitch.

Case II - ⁴³⁵ 69-904 ^{A #B} - Incidental finding in a rhesus monkey killed during the conditioning period because of a positive tuberculin test.

Case III - ⁴³⁶ P133 - Tissue from a one year old Chihuahua dog presented with a history of hind limb stiffness 2 to 3 days in duration. The animal had vomited in the morning of the day of admission to a veterinary hospital. The animal died 3 days after admission.

Case IV - ⁴³⁷ 69-1742 - Tissue taken from the prescapular lymph node of a steer following a series of subcutaneous estradiol and progesterone injections.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

437
Case IV - 69 - 1742 - Lymphadenopathy in a steer following a series
of subcutaneous estradiol and progesterone injections. The lymph
node architecture is disorganized by accumulation of corn oil which
was used as a vehicle for the hormones.

JAMES E. ROGERS
Capt., VC, USAF
Veterinary Pathology Division

(17)

Histories for Wednesday Slide Conference
25 February 1970

438
Case I - 3-1117-69 - Tissue from a 3-year-old bitch. Since whelping 2 months previous, the animal had developed a continual bloody discharge from the vulva.

439
Case II - 4535 - Tissue from one of several cattle pastured on native grass with scrub timber. Clinically, subcutaneous edema of the perineum and a reddened, peeling muzzle were observed. Constipation was followed by soft, dark, mucoid stools with some blood clots.

440
Case III - 2917 - Tissue from the swollen upper jaw of a mature, untreated rat suffering from malocclusion.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
25 February 1970

Case I - ⁴³⁵S-1117-69 - The morphologic diagnosis on this section of uterus from a 3-year-old female dog was subinvolution of the placental sites. The foamy cytoplasm of the endometrial epithelium was due to the effect of progesterone on the uterus. Persistent corpora lutea are usually associated with this condition.

Ref.: Glenn, B. L.: Subinvolution of Placental Sites in the Bitch. 18th. Gaines Veterinary Symposium, 1968.

Beck, A. M. and McEntee, K.: Subinvolution of Placental Sites in a Postpartum Bitch. A Case Report. Cornell Vet, 56: 269-277, 1966.

Case II - ⁴³⁹4535 - The diagnosis in this 5-month-old cross-bred Hereford from Oklahoma was toxic tubular nephrosis due to oak poisoning. There were extensive erosions in the esophagus and rumen. Most participants did not think that the kidney lesion alone was diagnostic of oak poisoning. Numerous oxalate crystals present in the kidney led some to consider halogen toxicity in their differential diagnosis.

Ref.: Smith, H. A.: Pathology of Oak Poisoning. Southwestern Vet., 13: 343-349, 1959.

Case III - ⁴⁴⁰2777 - The lesion from the jaw of this rat was an epidermoid cyst. There were no adnexal structures in the cyst. The tooth in this section was a function of cut.

CHARLES A. MONTGOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

Historics for Wednesday Slide Conference

4 March 1970

- Case I. ~~693452~~ ⁴⁰⁰ - Incidental finding in an aged cow.
- Case II. ~~2724~~ ²²¹ - Tissue from an 18-month-old cow. Lungs were condemned at slaughter.
- Case III. ~~(3 slides)~~ ⁷⁴¹ - 65147 - Tissues from a 2 1/2 year-old hereford bull.

Slide ~~69-904~~ ⁷⁴¹ - Follow-up slide for Case II, 18 February 1970.
 Refer to "results" 18 February 1970. The mineralization observed within the adrenal is a common incidental finding in the monkey.

Ref.: Ross, M.A., Innes, J.R.M., and Gainer, J.H.: Dystrophic Calcification in the Adrenals of Monkeys, Cats, and Dogs. Archives of Pathology, Vol. 60, pp. 655-662, 1955.

JAMES E. ROGERS
 CAPT., USAF, VC
 Veterinary Pathology Division

RESULTS OF THE WEDNESDAY SLIDE CONFERENCE

4 March 1970

440
Case I. 693452 - Carcinoma in the uterus of an aged cow. Opinions of the participants present were:

squamous cell carcinoma 3
adenocanthoma 1
adenomyoma 1
adenocarcinoma with squamous metaplasia 1

The contributors diagnosis was uterine adenocarcinoma.

Ref.: Monlux, A.W., W.A. Anderson, and C.L. Davis. A survey of tumors occurring in cattle, sheep and swine. Am. J. Vet. Res. 17:646-677, 1956

Monlux, A.W., W.A. Anderson, C.L. Davis and W.S. Monlux.
Adenocarcinoma of the uterus of the cow--differentiation of its pulmonary metastases from primary lung tumors. Am. J. Vet. Res. 17:45-73, 1956.

Case II. 445
2724 - Fibrinous pneumonia (shipping fever) in an 18-month-old cow. Cultures were not made

Case III. 770 (3 slides) - 65147 - Chediak-Higashi syndrome in a 2-1/2-month old Hereford bull. Microscopically, the outstanding morphologic defect is recognizable in the large granules present in the granulocytes. This defect is apparently manifested in all granules of the animals, i.e., melanin, pituitary, pancreatic, acinar etc.

→ lysosomes, p. 117, SMH

Also commonly observed microscopically are lymphoid hyperplasia and renal lesions characterized by nonsuppurative interstitial nephritis, lipofuscinosis of the convoluted tubules and biliary nephrosis with the presence of PAS positive inclusions.

The disease is seen expressed as an autosomal recessive in man, mink, and cattle. v. Noese.

Ref.: Padgett, George A.: Advances in Veterinary Science, pp. 239-284, 1968.

Blume, R.S., G.A. Padgett, S.M. Wolff and J.M. Bennett. Giant Neutrophil Granules in the Chediak-Higashi Syndrome of Man, Mink, Cattle and Mice, Canadian J. of Comparative Medicine, 33:(4) pp271-274, October 1969

Lutzner, M.A., J.H. Tierney, B.S., and Earl P. Benditt. Giant Granules and Widespread Cytoplasmic Inclusions in a Genetic Syndrome of Aleutian Mink. Laboratory Investigation, 14:(12) pp. 2063-2079, 1966.

RESULTS OF WEDNESDAY SLIDE CONFERENCE (cont.)
4 March 1970

- Padgett, G.A., C.W. Reigum, J.R. Gorham, D.E. Henson and C.C. O'Mary. Comparative Studies of the Chediak-Higashi Syndrome. The Amer. Journal of Pathology, 51:(4) pp. 553-571, October 1967.
- Dent, P.B., L.A. Fish, J.C. White, and R.A. Good. Chediak-Higashi Syndrome. Observations on the Nature of the Associated Malignancy. Laboratory Investigation, 15:(10) pp. 1634-1642, 1966.
- Moran, T.J., and Jose M. Estevez. Chediak-Higashi Disease. Morphologic Studies of Patient and her Family. Archives of Pathology, 88:329-339, October 1969.
- Douglas, S.D., R.S. Blume and S.M. Wolff. Fine Structural Studies of Leukocytes from Patients and Heterozygotes with the Chediak-Higashi Syndrome. Blood, 33:(4) pp. 527-540, April 1969.
- Bennett, J.M., R.S. Blume and S.M. Wolff. Characterization and Significance of Abnormal Leukocyte Granules in the Beige Mouse: A Possible Homologue for Chediak-Higashi Aleutian Trait. J. Lab. & Clin. Med., 71:(2), pp. 235-243, February 1969.

A Kodachrome showing normal and C-HS affected (partial albinism) Hereford bull is also included.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Abstract for Wednesday 7 Jan Conference
12 March 1970

Case I - 59-⁴⁴¹ Tissue from a female mouse exposed to a low O_2 concentration. Histological changes were observed. The animal was found dead in the cage. Blood chemistry studies were statistically normal.

Case II - 59-⁴⁴² Tissue from a 6-month-old dog.

Case III - 59-⁴⁴³ Tissue from a 3-year-old Doberman dog. Clinically, signs of ataxia, depression, and blindness were observed.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
11 March 1970

441
Case I - 1512-69 - Acute leukemia in a mouse with marked involvement of the alveolar capillaries. Spleen and liver also showed marked leukemic involvement.

Ref.: Old, J. W., et al.: Human Lung in Leukemia: Observations on alveolar capillary leukostasis with reference to pathologic physiology. Amer. J. Path. 31: 605, 1955.
Bodey, G. P., et al.: Pulmonary Complications of Acute Leukemia. Cancer 19: 781-793, 1966.

442
Case II - 16219 - "Hardpad" in a 6-month-old dog. Cytoplasmic inclusions were in the epithelium, basal to heavily keratinized layers.

443
Case III - 69-427 - Diffuse, demyelinating, non-suppurative meningoencephalitis in a 5-year-old Dachshund dog. Extremely large intranuclear, brightly eosinophilic inclusion bodies are present in many neurons and astrocytes. Occasionally both intranuclear and cytoplasmic inclusions are present in the same neuron. The reaction in the white matter is characterized by demyelination, focal gliosis and heavy lymphocytic perivascular cuffing.

Opinions of the participants present were:

Canine distemper - 6
"Old Dog Encephalitis" - 1

The contributor's diagnosis was "Old Dog Encephalitis".

Ref.: Cordy, D. R.: Canine Encephalomyelitis. Cornell Vet. 32: 11-28
1942.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

20

HISTORIES FOR WEDNESDAY SLIDE CONFERENCE

13 March 1970

Case I. ⁴⁴⁷ 1338099 - Tissue from a 2-year-old male cat. History of an abdominal mass surgically removed six months previously.

Case II. ⁴⁴⁸ 18521 - Tissue from a 10-year-old poodle bitch. Grossly, one large (1 cm) and one small, round tumor (.5 cm) were near opposite edges of the spleen near the tip.

Case III. ⁴⁴⁹ 69-236 - Tissue from a 2-week-old female reindeer.

Case IV. ⁴⁵⁰ 13429 - Tissue from a 12-week-old beagle.

JAMES E. ROGERS
Capt. USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
18 March 1970

⁴⁴⁷
Case I - 1330699 - Metastatic nephroblastoma of the right kidney in a young male cat. Opinions of the participants present were:

Adenocarcinoma - 8
Bronchiolar carcinoma - 1
Papillary adenoma - 1
Nephroblastoma - 1

Metastatic foci became apparent in the lungs and peritoneum 5 and 8 months after ablation of the primary tumor. This particular case is described by the contributor in the following reference:

Potkay, S. and Garman, R.: Nephroblastoma in a Cat: The Effects of Nephrectomy and Occlusion of the Caudal Vena Cava. *J. Small Anim. Pract.*, Vol. 10, pp. 345-349, 1969.

⁴⁴⁸
Case II - 18521 - Nodular hyperplasia in the spleen of a 10-year-old poodle bitch.

⁴⁴⁹
Case III - 69-236 - Acute mycotic meningoencephalitis in a 2-week-old female reindeer, etiology phycomycetes. The conspicuous presence of hyphae in some areas of the tissue in the absence of a cellular response was discussed. Most participants felt this represented farther hyphal growth after the death of the animal.

Ref.: Swenberg, J. A., Koestner, A. and Tewari, R. P.: The Pathogenesis of Experimental Mycotic Encephalitis. An Ultrastructural Study. *Lab. Invest.*, Vol. 21, No. 5, pp. 365-373, 1969.

⁴⁵⁰
Case IV - Experimental ICH in a 12-week-old beagle. Basophilic intranuclear inclusion bodies can be observed in the tubular epithelial cells which are adjacent to the inflammatory cells in the cortex. The epithelial cells of the pelvis occasionally contain eosinophilic inclusion bodies in their cytoplasm. According to the contributor, the kidney lesions, pyelitis et al with the exception of the inclusions in the pelvis epithelium have been repeatedly produced by ICH virus. The lesions develop after the phase of the acute clinical disease and may persist in some degree for 120 days or longer. Some of the inflammatory foci apparently progress to fibrosis.

Ref.: Wright, N. G.: The Relationship Between the Virus of Infectious Canine Hepatitis and Interstitial Nephritis. *J. Small Anim. Pract.*, Vol. 8, pp. 67-70, 1967.

Wright, N. G.: Experimental Infectious Canine Hepatitis. *J. Comp. Path.*, 77: 153, 1967.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Histories for Wednesday Slide Conference
25 March 1970

451

Case I - 68-3189 - Tissue from a 6-year-old thoroughbred mare. The mare had been unable to eat properly for the last 4 months. Chewing and deglutition were apparently normal, but the lips and tongue had reduced prehensile ability. Abnormalities in the EEG were observed.

452

Case II - 69-1274 - Tumor removed from an 11-year-old cocker spaniel.

453

Case III - 69-2021 - Tissues from the reproductive system of the same dog.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
25 March 1970

Case I - ⁴⁵¹69-1185 - The morphologic diagnosis in this brain from a 6-year-old horse was encephalomalacia of the globus pallidus. There was minimal glial proliferation. This entity in the horse was diagnosed as yellow star thistle poisoning (Centaurea solstitialis).

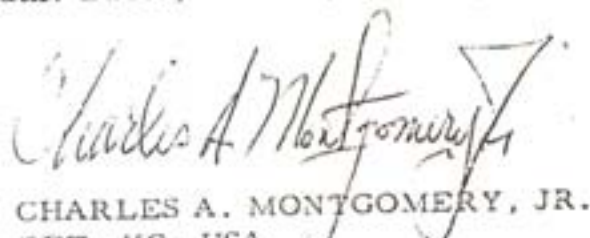
Ref.: Cordy, D. R.: Nigropallidal Encephalomalacia in Horses Associated with Ingestion of Yellow Star Thistle. *J. Neuropath. and Exp. Neurology*, Vol. 13, pp. 330-342 (1954).

Larson, K. A. and Young, S.: Nigropallidal Encephalomalacia in Horses in Colorado. *JAVMA*; Vol. 156, No. 5, March 1, 1970.

Case II and III - ⁴⁵²69-1274, ⁴⁵³69-2021 - These tissues were from the same dog. Morphologic diagnoses were: canine mixed mammary tumor, cystic hyperplasia of the endometrial glands, and cystic ovary. Discussion followed on recognition of myoepithelial cells and proliferation of same. This was not resolved. It was agreed upon however, that there was cystic hyperplasia and ductal adenocarcinoma of the uterus with neoplastic involvement of mesenchymal components, which according to Moulton's classification fits the criteria for the mixed mammary tumor. It was undecided as to whether the cysts in the ovary represented follicular or paraovarian cysts. Degenerative changes, including mineralization, were present in several follicles. An excellent set of references on the uterine lesion is included for your interest.

Ref.: Doll, C.: The Cystic Hyperplasia-Pyometra Complex in the Bitch. *J. Comp. Path.*, Vol. 69, pp. 237-252, 1959.

Doll, C.: Experimental Reproduction of the Cystic Hyperplasia-Pyometra Complex in the Bitch. *J. Path. Bact.*, Vol. 78, No. 1, pp. 267-278, 1959.


CHARLES A. MONTGOMERY, JR.
CPT, VC, USA
Veterinary Pathology Division

(22)

Histories for Wednesday Slide Conference
1 April 1970

212/1-8
Case I - A-00034 (2 slides) - Tissue from one of 4 owl monkeys received from a domestic supplier. All were juveniles and in poor condition. After arrival, they became anorectic and depressed. Three of the four died within 6 days of arrival.

1125
Case II - P131 - Tissue from a 6-month-old lamb found down in a feedlot and unable to rise. It was the only animal affected.

456
Case III - 14062 - Tissue from a Siamese male cat, 7-weeks of age, one of a litter in which 2 deaths had occurred a few days previously. This kitten was cyanotic and gasping for breath. It was killed with pentobarbital. Necropsy observations were fluid in thorax and pericardium, pneumonia, right heart and pulmonary artery dilatation and enlarged liver. The submitting veterinarian suspected pneumonia secondary to circulatory insufficiency.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference

3 April 1970

Case I - ⁴⁵⁴ A-00034 (2 slides) Acute pasteurellosis in an owl monkey.

Lesions included were an acute necrotizing fibrinopurulent pneumonia, ^{Lung} and severe fatty degeneration of the liver. The question of whether the multifocal debris containing spaces in the ~~liver~~ ^{Liver} were areas of necrosis or artifact was argued, but not resolved.

Ref.: Greenstein, E.T., et al. An Outbreak of Fulminating Infectious Disease in a Squirrel Monkey, Saimiri sciureus Lab. Anim. Care, 15, 74-80 (1965).

Case II - ⁴⁵⁵ P 131 - Focal symmetrical encephalomalacia in a 6-month-old lamb.

Probably related to enterotoxemia. ^{Bram}

Case III - ⁴⁵⁶ Toxoplasmosis in a 7-week-old Siamese kitten. ^{Cat}

Ref. Sheffield, H.G., and Melton, M.: Toxoplasma gondii: the oocyst, sporozoite, and infection of Cultural Cells. Science, 167, (6 Feb. 1970): 892-893.

Frenkel, J.K., Dubey, J.P., and Miller, N.L.: Toxoplasma gondii in Cats: Fecal Stages Identified as Coccidian Oocysts. Science, 167, (6 Feb. 1970): 893-896.

Hirth, R.S. and Nielsen, S.W.: Pathology of Feline Toxoplasmosis. J. small Anim. Pract. Vol. 10, 1969, pp. 213-221.

Reference Case I - 69-59 Feb. 1969.

L.E. Zimmerman's opinion was: "Adenocarcinoma, very likely a malignant mixed tumor."

Reference Case I - 68-3185 - 25 March 1970. Gross Kodas of case are included.

JAMES E. ROGERS
Capt., USAF, VC
Veterinary Pathology Division

Histories for Wednesday Slide Conference
15 April 1970

(24)

- Case I - ¹⁴⁵⁷¹7457 (2 slides) - Tissue from an aged burro.
- Case II - ⁴⁵⁸1172423 - Tissue from a Formosan spotted civet.
- Case III - ⁴⁵⁹1329383 - Tissue from an adult female Macaca mulatta.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
15 April 1970

Case I - 7457 (2 slides) - Liver and kidney - Tubular nephrosis in an aged burro, etiology Klossiella equi. Anterior mesenteric artery - Verminous arteritis, etiology Strongylus vulgaris.

Case II - 1172423 - Meningoencephalitis in a Formosan spotted civet, etiology Cryptococcus.

Case III - 1329383 - Papillomatosis in an adult female Macaca mulatta. Inclusion bodies not observed.

Reference:

Baldwin, Lucke, Ratcliffe, and Breedis: Transmissible Papilloma in Monkeys. Federation Proceedings, Vol. 9, pp. 337, 1950.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Histories for Wednesday Slide Conference
22 April 1970

460
Case I - 1322540 - Tissue from a 5-week-old pig. In addition to nursing; these pigs were being fed a supplement ration containing .5% sodium chloride. Additionally, the sows were beginning a marked decline in milk production and a drinking water source for the pigs was unavailable.

461 030
Case II - 17349 - Tissue from a 5-year-old primate.

462 030
Case III - 67-2569 - Tissue from a 4-year-old male basset hound. The dog was admitted with a history of chronic depression and lethargy. At euthanasia, tendon, righting, visual, and placing reflexes were present, but delayed.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference

22 April 1970

✓
Case I - 1322540 - Severe diffuse nonsuppurative, meningoencephalitis in a 5-week-old pig, etiology probably Aujeszky's virus. The contributor based his diagnosis of Aujeszky's disease upon the vasculitis, gliosis, neuronal degeneration and presence of intranuclear herpetiform inclusions within the neurons. One participant also described similar inclusions.

481 C 20
Case II - 17349 - Interstitial pneumonia in a 5-year-old child, etiology Pneumocystis carinii was confirmed with a GMS stained section. (To be forwarded with 6 May slides). The contributor points out that for diagnostic purposes this tissue could be from a human, dog, cat, rat, rabbit, guinea pig, mouse, goat, or sheep.

Ref.: Carini, A. 1919. (The disease in rats) Bol. Soc. de med. cir Sao Paulo 18: 204-

Frenkel, J. K. et al. 1966. Latent p. infection of rats. relapse, and chemotherapy. Lab. Invest. 15 (10): 1559-77.

Reye, R. & R. T. Seidam. 1956. Pneumocystis pneumonia ibid 72: 451-60.

Sheldon, H. W. 1959. P. carinii inf. in rabbits. J. Exp. Med. 110: 147.

Wilson, J. F. et al. 1960. P. carinii pneumonia: a case and review. Pediatrics 25: 468-76.

Case III - 67 - 2569 - Lafora's-like inclusions with associated syndrome in a 4-year male basset hound. Microscopic lesions were confined to the brain. Within the perikarya of neurons and neuropile throughout the brain were numerous large basophilic inclusions. Histochemically, these were identified as glycoprotein in nature. Their ultrastructure was similar to that of Lafora bodies associated with the familial form of progressive myoclonus epilepsy in man. To my knowledge this lesion has not been reported in animals. A PAS stained section will be forwarded with the 6 May slides.

Ref.: Myoclonus Epilepsy With Lafora Bodies: Case Report With Electron Microscopic Observation. E. H. Jenis, S. S. Schochet, Jr., and K. M. Earle. Military Med., Vol. 135, No. 2, Feb. 1970

Archives Neurology, Vol. 12, 1965, pp. 172-188. Schwaz and Yanoff.

Archives Pathology, Vol. 86, 1968, pp. 239-254. Collins, Cowden, and Nevis.

JAMES E. ROGERS
Capt., USAF
Veterinary Pathology Division

DR. ROONEY'S CONFERENCE
A. USAR

- 463 67-224
Squamous cell carcinoma, penis and prepuce, horse.
- 464 67-294
Osteodystrophia fibrosa.
- 465 67-638
Interstitial cell tumor and seminoma, testicle, horse.
- 466 67-672
Meningitis, spinal cord, horse. Etiology - Pantopague injected into cisterna magna.
- 467 67-835
Foreign body pneumonia, horse, (Pneumonia, bronchial, acute, severe)
- 468 67-019
Acute foreign body pneumonia, cow.
- 469 68-76
Colitis X, colon, horse.
- 470 68-494
Colitis X, colon, horse.
- 471 68-400
Cerebellar hypoplasia, HOLSTEIN (MILKMAKING).
- 472 69-356
Acute graft rejection of a goat heart implanted into a calf.
- 473 69-363
Segmental myelitis, spinal cord, horse.
- 474 69-374
Pulmonary nematodiasis, pig.
- 475 69-395
Smooth muscle hyperplasia, lung, cow. 2. liver
- 476 69-405
Wobler syndrome, spinal cord, horse. Wallarian degeneration present.
Etiology - Asymmetrical development of the true joints of the vertebrae.
- 477 69-452
Hemorrhagic metritis, uterus, cow. Etiology - undetermined.
- 478 69-462
Verminous endarteritis, anterior mesenteric artery, horse (9 yr. old).

DR ROONEY'S CONFERENCE
AT WRAIR

- 479 69-480
Encephalitis and pneumonia, lung and brain, horse, Etiology - Phycomycetes.
- 480 69-489
Acute (chronic?) passive congestion, liver, cow. Etiology - Undetermined.
- 481 69-515
Blackleg, steer.
- 482 70-38
Viral equine rhinopneumonitis in an aborted fetus, horse.
- 483 70-42
Adrenal with endocrine tumor, horse.
- 484 70-67
Equine infectious anemia, liver, horse.

26

Results of Wednesday Slide Conference
29 April 1970

485
Case I - 67-1975 - Johne's disease in a 10-year-old cow. Acid fast will be forwarded with slides for 20 May 1970.

221
Case II - G743 - Opinions of the participants present were:

Pheochromocytoma - 6
Medullary Adenoma - 2
Cortical Adenoma - 1

The contributor's diagnosis was neuroblastoma. Request for consultation has been forwarded to Dr. Oertel, Chief, Endocrinology Branch, AFIP. His opinion will be reported at a later date.

23, 640
Case III - 68-19 - Proliferative and necrotizing tracheobronchitis with intranuclear inclusions and hyaline membrane formation in a canine. This case was reported by the contributor in the following reference.

Kelly, D. F.: Canine Proliferative and Necrotizing Tracheobronchitis, with Intranuclear Inclusion-Body and Hyaline Membrane Formation. Path.vet. 6: 227-234 (1969).

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

23

Histories of Wednesday Slide Conference

6 May 1970

⁴²⁰
Case I - 70 - 10 - Tissue from a foxhound that swallowed a foxtail.

²⁷⁷
Case II - S 18 - Tissue from a 12-year-old cat.

⁴⁹⁰
Case III - (no #) - Tissue from a 22-day-old male primate.

²⁷¹
Case IV - 0414 (Fish) - Tissues from a "Crappie" derived from the contributor's local aquarium. There were numerous worm-like parasites deeply inbedded in the skin. There were nodular thickenings at the points of entry into the skin.

JAMES E. ROGERS
Capt., USAF
Veterinary Pathology Division

Results of Wednesday Slide Conference
6 May 1970

488
Case I - Chronic granulomatous suppurative esophagitis in a foxhound, etiology, Actinomyces sp. or Nocardia sp. With special bacterial stains densely packed clusters of fine branching, beaded filamentous organisms can be seen within the granules. These are gram-positive (McCallum-Goodpasture) and not acid-fast (Fite-Faraco). Actinomycosis and Nocardiosis in visceral infection are traditionally distinguished on the basis that Actinomyces sp. is not acid-fast and may be associated with sulfur granules. The reference cited below casts serious doubt on the reliability of these criteria and points out the need for cultural identification if an etiologic diagnosis is to be rendered.

Ref.: Robboy, S. J. and Vickery, A. C.: Tinctorial and Morphologic Properties Distinguishing Actinomycosis and Nocardiosis. N. E. J. Med., 282, 11, 593-596, Mar. 12, 1970.

489
Case II - S18 - Severe chronic hepatitis in a 12-year-old cat. Opinion of the participant present was chronic necrotizing hepatitis with post necrotic fibrosis. Contributor's diagnosis was chronic cholecystitis with a chronic active cholangiohepatitis, hepatic necrosis and fibrosis. Numerous gram-positive, pleomorphic microorganisms (Cocci?) are visible on a bacterial origin is well known in cats and is often an ascending infection.

Ref.: Jubb, K. V. K. and Kennedy, P. C.: Pathology of Domestic Animals, 207, Academic Press, N. Y., 1963.

490
Case III - Spontaneous fatal acute necrotizing interstitial pneumonia in a 22-day-old owl monkey, etiology, a simian adenovirus - SV11. To the contributor's knowledge this specific etiology associated with this spontaneous disease condition has not been reported. Selected references on adenovirus infections in primates are cited below.

Ref.: Hull, R. N. and Tynell, D. A. J.: Simian Viruses Rhinoviruses, Virology Monograph, Springer-Verlag, 1968.
Landon, J. C. and Bennett, D.: Viral Induced Simian Conjunctivitis, Nature 223 (56211), 683-684, May 17, 1969.
Becraft, D. M. O.: Histopathology of Fatal Adenovirus Infection of Respiratory Tract of Young Children. J. Clin. Path., 20, 561-569, 1967.

491

Case IV - 0414 (Fish) - Anchorworm (Lernaea sp.) infection in a "crappie". They are worm-like but they are parasitic copepods (a branch of crustacea). These parasites are attached deeply by the anchor-like appendage in the head region.

Ref.: Van Duijn, C. Jr.: Diseases of Fishes. Charles C. Thomas, 14-17, 1967.

Reinchenback-Klincke, H. and Elkan, E.: The Principal Diseases of Lower Vertebrates. Academic Press, 112-113, 1965.

29 April 1970 - Case II - G743 - adrenal tumor in a goat.

Dr. James Oertel, Chief, Endocrinology Branch, AFIP gave the following opinion "We favor adrenal tumor of medullary origin, ? pheochromocytoma.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

AFIP

11-28 copy case

#490

32 day old male Macaca mus,
central body, ^{upward} no nodules.

M. Green

Incubation period by
a primate adenovirus - SV₁₁

Diagnosis) Student
EM

70-10 #488

Tissue from a Foxhound that swallowed
a fox tail.

Ref.

Rebboy, Stanley J., and Vickery, Austin C.:
HISTORICAL and Morphologic Properties
Distinguishing Actinomyces and
Neocardiosis. New England Journal of
Medicine, Vol. 282 No. 11 (Mar. 12, 1970):
593-596.

Reference: Sherwood, B. F. et al.: The Opossum, *Didelphis Virginiana* as a laboratory animal. Laboratory Animal Care 19:494 (1969).

Case #DBA: Male mouse 10 weeks. DBA/2J strain. Incidental finding in control mouse at necropsy. 1 2X2 Kodachrome slide showing epicardial mineralization.

Diagnosis: Spontaneous cardiac calcification.

Reference: Nabors, C. E. and Ball, Carroll, R. Spontaneous Calcification in Hearts of DBA Mice. Anat. Rec. 164:153-162 (1969).

Case #0414 (Fish): "Crappie" derived from local aquarium. There were numerous worm-like parasites deeply imbedded in the skin. There were nodular thickenings at the points of entry into the skin.

2 - 2X2 Kodachrome slides depicting gross pathology.

Diagnosis: Anchor worm (*Lernaeus* sp.) infection. Anchor worm is actually a misnomer. They are worm-like but they are parasitic Copepods (a branch of the Crustacea). These parasites are attached deeply by the anchor-like appendage in the head region. On pages 7-9 of the book by Van Duijn there is a good discussion regarding the histology of fish skin.

Reference: (1) Van Duijn, C. Jr. "Diseases of Fishes." Charles C. Thomas, pg. 14-17 (1967). (2) Reichenback-Klinke, H. and E. Elkan. The Principal Diseases of Lower Vertebrates. Acad. Press. pg. 112-113 (1965).

Case #0531: Adult male opossum
Died after several months of captivity.

Diagnosis: Vegetative endocarditis and myocarditis.
Many of our opossums have died with lesions of vegetative valvulitis and septicemia. This opossum also had bacterial emboli in the brain.

Two cases submitted by: Dr. Stephen A. Benjamin
Department of Comparative
Milton S. Hershey Medical Center

Case #S-18 (4)

Sections of liver and gall bladder were submitted from a 12 year-old domestic cat. No history of illness was given, and the cat was said to have died suddenly.

Grossly the liver contained numerous yellowish, firm, smooth nodules from one to several cm. in diameter. Some of these nodules had a fibrous capsule. The gall bladder wall was extremely thickened and fibrotic.

The diagnosis was chronic cholecystitis with a chronic active cholangiohepatitis, hepatic necrosis and fibrosis. The lesions vary in age but have obviously been present for at least a matter of months. Some areas of the liver were almost entirely connective tissue. There was periportal fibrosis and ductular proliferation in many areas so that the lesion could ~~correctly be called~~ a biliary cirrhosis. Numerous Gram-positive, pleomorphic microorganisms (cocci?) are visible on the bacterial stain section.

Cholangiohepatitis of bacterial origin is well-known in cats and is often an ascending infection.

Reference Jubb, K.V.K. and Kennedy, P.C. Pathology of Domestic Animals, pg. 207. Academic Press, New York (1963).

Case #S-108 (3)

A three-year old, male Kangaroo had been treated for muscle weakness and atrophy for two weeks. The skeletal muscles of the hind limbs had extensive, severe hyaline degeneration. Many fibers had evidence of mineralization. These sections also demonstrate hyperplasia of the sarcolemma and abortive attempts at regeneration. The probable diagnosis is nutritional muscular dystrophy. Other Kangaroos from the same source have died with a similar clinical picture although no pathological work was performed on these animals. No information on the diet was available.

(29)

Histories for Wednesday Slide Conference
20 May 1970

- Case I - ¹¹⁹⁹CM7-29 - Tissue from a 4-year-old primate. Clinical signs included severe generalized somatic edema for 2 weeks ending in death.
- Case II - ¹¹⁹²67-7636 - Tissue from a mouse.
- Case III - ¹¹⁹¹Incidental finding in an old German shepherd.
- Case IV - ¹¹⁹⁵Tissue from a bovine.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
20 May 1970

492
Case I - GM7-29 - Acute fatal Chagas' in a 4-year-old child, etiology Trypanosoma cruzi. Organisms were present in most sections.

Ref.: Reeder, M. M., and Simao, C.: Chagas' Myocardiopathy. Seminars in Roentgenology, Vol. 4, No. 4 (Oct.), 1969.

493
Case II - 67-7636 - Sarcocystis in a mouse.

494
Case III - Thyroid tumor in an aged German shepherd. Opinions of the participants present were:

Thyroid adenoma - 3
Tumor - 1
Carcinoid - 1
Adenocarcinoma - 3
Hyperplasia - 1

The contributor's diagnosis was ultimobranhial tumor. Request for consultation has been submitted to Dr. J. Oertel, Chief, Endocrinology Branch, AFIP. His opinion will be forwarded at a later date.

Ref.: Williams, E. D.: Histogenesis of Medullary Carcinoma of the Thyroid. Clin. Path., 19: 114-118, 1969.

Lindsay, S, Nichols, C. W. and Chaikoff, I. L.: Naturally Occurring Thyroid Carcinoma in the Rat. Arch. Path., 86: 353-364, 1968.

495
Case IV - Spontaneous neuronal lipodystrophy in an 18-month-old beefmaster bull. The animal, which had been blind and intermittently circling for approximately 6 months, became comatose prior to death. Aggregates of coarse eosinophilic granules, most frequently in a perinuclear location, are observed in the cytoplasm of all neurons. Reactions of these inclusions with luxol fast blue, oil red O and sudan black B indicate they are a lipid substance. This particular case was reported by the contributor in the reference cited below.

Ref.: Read, W. K. and Bridges, C. H.: Neuronal Lipodystrophy. Path. vet. 6: 235-243 (1969).

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

30

Histories for Wednesday Slide Conference
27 May 1970

Case I - ^{477, 7+6}1752-69 (2 slides) - Tissues from a pale cat.

Case II - ⁴⁷⁷13,728 - Tissues from a 6-year-old German shepherd dog. The contributing veterinarian provided no history, but the specimen, although enlarged to 4x6 cm., retained the general shape of a testicle.

Case III - ⁴⁹³956 - Tissue from a young adult skunk.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference

27 May 1970

476 3-1
Case I- 1752 - 69 (2 slides) - Reticuloendotheliosis in an adult male cat. A blood smear taken at necropsy showed the typical large poorly differentiated cells associated with the disease. Mitotic figures in these circulating cells were not rare. Blood picture at necropsy was: HCT-5%, HGB-1.6 gm., RBC-0.77 million, and WBC-9.1 thousand. The differential diagnosis, based on examination of tissue would only be malignant lymphoma or another neoplastic myeloproliferative disease.

Ref.: Reticuloendotheliosis a Myeloproliferative Disease of Cats - A Comparison with Lymphocytic Leukemia by E. C. Gillmore, Path. Vet., Vol. 1, pp. 161-183, 1964.

Spontaneous Hematopoietic Neoplasms of the Domestic Cat. Svend W. Nielsen, National Cancer Institute Monograph 32, Aug. 1969, pp. 73-90.

497
Case II - 13728 - Testicular tumor in a 6-year-old German shepherd dog. Opinions of participants present were:

Anaplastic Sertoli cell tumor	2
Mixed, Sertoli cell & seminoma	4
Seminoma	5
Testicular tumor	1
Mixed, Sertoli cell, seminoma & interstitial cell	1

Dr. F. K. Mostofi, Chief, Genitourinary Path. Branch, AFIP, commented: "This is a difficult one. In areas it suggests seminoma, in others carcinoma and in still others, Sertoli cell tumor." AFIP diagnosis was, testicular tumor, mixed, Sertoli cell and seminoma. This excellent case demonstrates the complexity of some canine testicular tumors.

498
Case III - 956 - Normal scent gland in a young adult skunk.

JAMES E. ROGERS
Capt., USAF, VC
Veterinary Pathology Division

Histories for Wednesday Slide Conference
3 June 1970

- Case I - ⁴⁹⁹1094 - Tissue from a mammal.
- Case II - ⁵⁰⁰1335596 - Tissue from a guinea pig.
- Case III - ⁵⁰¹65-302 - Tissue from a sheep.
- Case IV - ⁵⁰²68-970 - Tissue from a 1- $\frac{1}{2}$ -year-old horse.

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division

Results of Wednesday Slide Conference
3 June 1970

499
Case I - Focal suppurative pneumonia in a dolphin (T. truncatus), etiology, probably unidentified holotrich. In addition, pulmonary edema and fibrosis are associated with affected air sacs. Pneumonic areas contain innumerable ciliates. This case is described by the contributor in the reference cited below.

Ref.: Woodard, J. C. et al.: Some Parasitic Diseases of Dolphins.
Path vet 6: 257-272 (1969).

500
Case II - 1335596 - Normal placentome in a guinea pig.

501
Case III - 65-302 - Eighty lambs (about) out of 400 ewes were ill with lameness, interdigital abscesses, and proliferative sores on the lips and buccal mucosa. Ten percent had interdigital lesions.

Microscopically, the sublingual dermis is not remarkable. The epidermis of the dorsum is covered with purulonecrotic debris which has replaced the outer layers. The deeper layers appear to have undergone pseudoepitheliomatous hyperplasia but this is difficult to evaluate because of the location. There is parakeratosis with cytoplasmic vacuolation just beneath the debris. Small inclusions resembling viral inclusions are found in the vacuolated cytoplasm. The superficial dermis contains macrophages, fibroblasts, and some polys. In some areas the dermal response is almost granulomatous.

The history and lesions are compatible with diagnosis of contagious ecthyma.

502
Case IV - 68-970 - One side of the colt's face was enlarged since birth. A bloody discharge from mouth was noted two days prior to examination. A firm, baseball-sized (6 cm in diameter) swelling was present below the left eye involving the molar teeth, nasal cavity, and maxillary sinus.

Grossly, the cut surface of the mass was firm with hard structures scattered throughout and a creamy exudate mixed with the firm material. The color was red and whitish-yellow and the mass had a foul odor.

Microscopically, the tumor consists mainly of malformed, poorly structured denticles, containing cementum and enamel which have even induced periosteal bone formation in places. There is relatively little ameloblastic epithelium present in the tumor. Thin cords of odontoblasts are present around the masses of omentum. In the stroma surrounding the tooth-like structures are some bizarre appearing encapsulated whorls of structures which appear to be nerve trunks which are partially degenerate and distorted by trauma. In this area there are some proliferating bizarre epithelial cells which are probably neoplastic odontoblasts.

This tumor fits that described in humans as the compound odontoma in which there is formation of malformed denticles, sometimes in large numbers, without preponderant ameloblastic epithelial proliferation. It is a relatively uncommon tumor.

Follow-up on Case III - 69-42 - May 20, 1970 Conference

The contributor considers the neoplasm to be one of Parafollicular" or calcitonin-producing cells. The designation as an ultimobranchial tumor was based on reported observations of similar lesions in bulls:

Jubb, K. V. and McEntee, K.: The relationship of ultimobranchial remnants and derivatives to tumors of the thyroid gland in cattle. *Cornell Vet.*, 49: 1959, 41-69.

Jubb, K. V. and Kennedy, P. C.: *Pathology of Domestic Animals*, Vol. 1, Academic Press, 1963, 330-332.

The circulated references by Williams, et al. and Lindsay, et al. discuss similar lesions in man, dogs, and rats. "Medullary carcinoma" is considered the likely human counterpart of the lesion in animals, but "ultimobranchial tumor" seems more desirable until more is known about the lesion's behavior in animals. Further support of this designation comes from the likelihood that parafollicular cells of the thyroid do indeed derive embryologically from the ultimobranchial body (William, E. D.: *Histogenesis and function of medullary carcinoma of the thyroid.*" Symposium on Thyroid Neoplasia, London: Imperial Cancer Research Fund, 1967).

J. Oertel, Chief, Endocrinology Branch, AFIP, comments:

"Ultimobranchial or parafollicular cell tumor is a clever idea, but rather difficult to prove. Certain histochemical techniques for demonstration of hormonal peptides might give answer (pseudococcyamin etc.). Also may be 5-hydroxytryptamine might be demonstrated."

JAMES E. ROGERS
Captain, USAF, VC
Veterinary Pathology Division