犬のpeliosis hepatisの病理組織学的所見

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Five Cases of Canine Peliosis Hepatis

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Peliosis hepatis [5] was first described in man as a rare hepatic change characterized by multiple bloody cysts in the liver. Similar cases were reported in cattle [8], cat [10] and rat [3, 6]. This note is to describe five canine cases of peliosis hepatis experienced among 340 canine autopsy cases routinely accepted from 1984 to 1986 at this laboratory.

The clinical data of the cases are shown in Table 1. Each case had different clinical diagnosis, and Case A was treated with steroid for shock protection. Three of four female cases were probably multiparous, while the other one was spayed.

At necropsy of Cases A, B, C and E, multiple and dark red or livid areas 1 to 20 mm in diameter, round or irregular in shape, were scattered on the surface as well as cut surfaces of the liver, while Case D had a nodule 6 cm in diameter with "nutmeg" appearance on the cut surface of the lateral left lobe. Case A had a large amount of coagulated blood in the peritoneal cavity resulting from rupture of a dark-red nodule 3 cm in diameter at the lateral left lobe facing on the diaphragm. The liver of Case E showed multiple necrotic foci 0.1 to 1.5 cm in diameter on the cut surface.

For histopathology 2 to 4 μm paraffin sections were made from liver and other tissues fixed in 10% neutral buffered formalin, and they were

Table 1. Clinical records

Case	Breed	Sex	Age in years	Clinical diagnosis	Treatment
A	Maltese	M	6	Liver dysfunction	Corticosteroid
B	Mongrel	F[a)]	12	Renal failure	Cardiac glycosides, Diuretics
C	Mongrel	F	12	Diabetes mellitus	Insulin
D	Mongrel	F	14	Uremia	
E	Mongrel	F	14	Filariasis	

a) Spayed

Table 2. Liver pathology

Case	Shape	Endothelial lining	Compression	Hepatocyte necrosis
A	Round	+	+	−
B	Round	+	+	−
C	Irregular or round	±	−	+
D	Round	+	+	−
E	Irregular or round	±	−	+

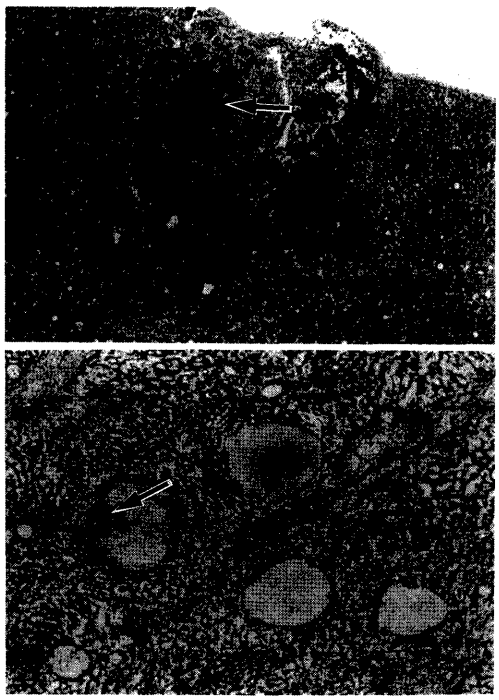

Fig. 1. Phlebectatic cysts with thrombi (arrows) of Case A (a) and B (b). HE stain ×85.

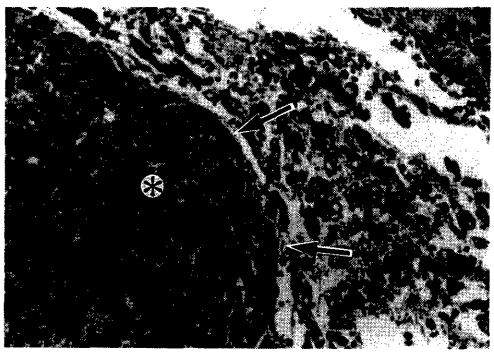

Fig. 2. Endothelial lining (arrows) of a large thrombus (*) within a phlebectatic cyst. Case A. HE stain ×170.

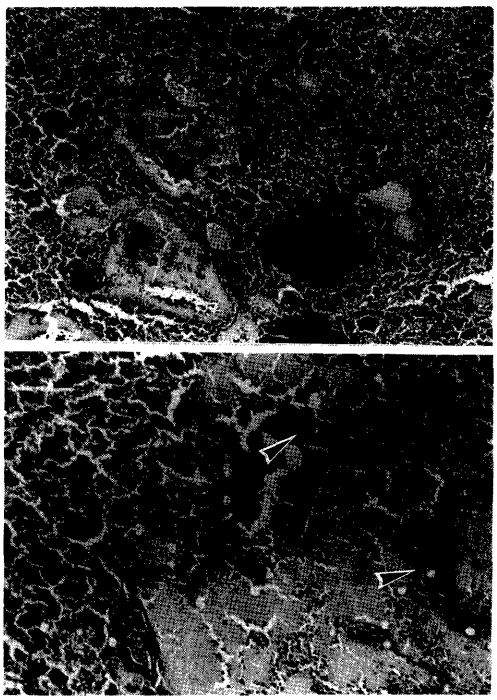

Fig. 3. Irregular-shaped parenchymal type cysts (a, ×85) containing necrotized hepatocytes (arrow heads) (b, ×170), Case E. HE stain.

stained with hematoxylin and eosin (HE), periodic acid methenamine silver (PAM) or others if necessary.

The liver of Cases B, D and E were congested without fibrosis. Fatty change and excessive glycogen storage certainly due to diabetes mellitus were severe in Case C. In Cases A, D and E, glomerulonephritis was observed, and Case A had also interstitial nephritis. Cases C and D had renal glomerulosclerosis, and Case D had also calcification in the glomeruli and renal tubules.

As presented in Table 2, blood-filled cysts in the liver of Cases A, B and D were round in shape, being surrounded by the vascular endothelium and communicated with the sinusoid. In Cases A, B, C and E, some conglutinated thrombi were shown to be attached to the endothelium (Fig. 1). In Case A, a large thrombus compressed and flattened the neighbouring cords of hepatocytes (Fig. 2). In Cases C and E only a few bloody cysts were round in shape and had vascular endothelial lining, while others were mostly parenchymatous and irregular in shape and were surrounded directly by a sheet of hepatocytes. Some necrotized hepatocytes or their debris were seen within the cysts (Fig. 3). In Case E, some larger bloody cysts were directly surrounded by fine connective tissue.

The pathological findings of the present canine cases were similar to those of peliosis hepatis in other animal and human cases. Neither inflammatory process nor neoplastic proliferation

was noticed in the vascular endothelium or hepatocytes. In man, peliosis hepatis has been classified into two morphological types [11]. Cases A, B and D might be phlebectatic type, while cases C and E were a mixture of phlebectatic and parenchymal types.

For the pathogenesis of peliosis hepatis, damages of the sinusoidal endothelium or hepatocytes as in congenital abnormal branching of liver veins [8], aging [6], hypervolemia [9], hypoxia [4], ischemia [4], and chronic wasting tuberculosis or cancer [7]. Virus infections [3] have been also proposed. Recently, the incidence of peliosis hepatis has been shown to increase in human cases treated with anabolic androgenic steroids [2, 7, 12], as in the present canine Case A. In animals, peliosis hepatis has been reported in feedlot-reared cattle [8] and cattle with St. George disease [9], and aged [6] or virus-infected [3] rats. Prevalence of peliosis hepatis in older cows has also been described [1]. Except for Case A 6-year-old, the present four cases were of comparatively aged and supposedly multiparous females having chronic disease with renal damage. Not only sex and age factors but also some other factors might be involved in the production of the present canine cases of peliosis hepatis.

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要　約

犬の peliosis hepatis の病理組織学的所見(短報)：井上　智・松沼尚史・小野憲一郎[1)]・林　俊春・高橋令治・後藤直彰・藤原公策(東京大学農学部家畜病理学教室，[1)]家畜内科学教室)——犬の peliosis hepatis 5例を病理組織学的に検索したところ，肝実質内の含血嚢胞部の形態学的特徴は，ウシ・ネコ・ラット・ヒトなどでの報告例と類似し，5例中3例は静脈拡張型，2例は実質型・静脈拡張型の複合型とみなされた．