

雌犬の生殖器アメーバ症の一例

誌名	Japanese journal of veterinary science
ISSN	00215295
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巻/号	50巻2号
掲載ページ	p. 549-551
発行年月	1988年4月

Pathology of Genital Amoebiasis in a Female Dog

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(Received 29 June 1987/Accepted 20 November 1987)

Jpn. J. Vet. Sci. 50(2): 549-551, 1988

KEY WORDS: dog, genital amoebiasis.

Entamoeba histolytica is known to be pathogenic for humans [3, 4, 8, 10] and nonhuman primates [5-7] and occasionally also in dogs [5-7] and cattle [6]. Canine cases were reported to be mostly sporadic with low prevalence and probably due to ingestion of protozoan cysts in human feces [6, 9]. The parasites are usually nonpathogenic for canines, residing in the lumen of the large intestines and sometimes causing ulcerative colitis with mucoid and bloody feces and rare dissemination to other organs [5, 6].

This note is to describe genital lesions in a 16-year-old female mongrel dog showing pudendal tumefaction and bloody discharge from the vagina. After surgical removal of the whole genital organs, the patient became apparently healthy.

The vaginal wall was prominently thickened, and multiple cysts 1 to 5 mm in diameter containing serous fluid were seen in the endometrium of the horns as well as both ovaries. Some dark-brown spots were seen on the cut surface of the vagina, cervix and uterus.

The removed organs were fixed in 10% neutral

buffered formalin and embedded in paraffin. Sections 4 μ m thick were made and stained with hematoxylin and eosin (HE), periodic acid Schiff (PAS), Masson's trichrome or Prussian blue. For electron microscopy the formalin-fixed samples were washed by phosphate buffered saline pH 7.4 and postfixed with glutar-aldehyde and osmium tetroxide, and embedded in Epok 812. Ultra-thin sections were stained with uranyl acetate and lead nitrate and they were observed by a JEM 100S electron microscope at 80 kV.

Erosive and ulcerative vaginitis and cervicitis

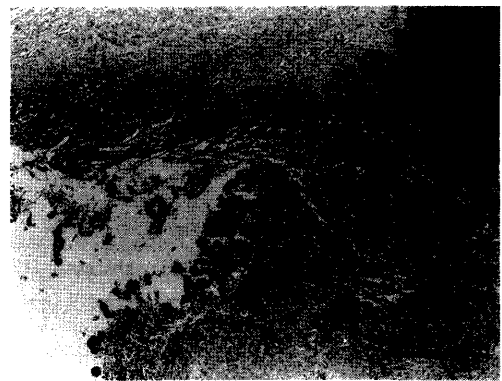


Fig. 1. Ulcer in the uterine cervix. HE. Bar=0.5 mm.

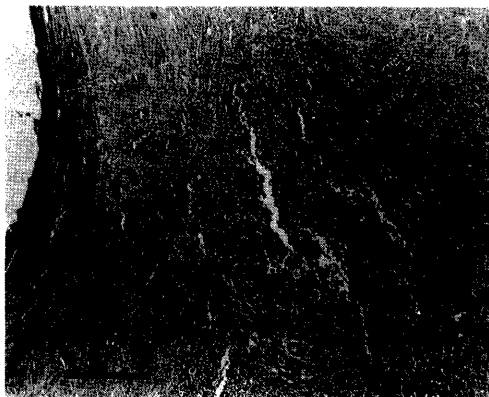


Fig. 2. Abscess and hemorrhage in the tunica muscularis of the uterine cervix and numerous amoebae and hemosiderin-laden macrophages. HE. Bar=0.5 mm

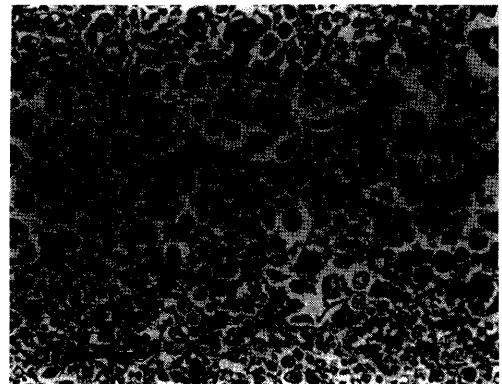


Fig. 3. Enlargement of a part of Fig. 1. HE. Bar=0.1 mm.

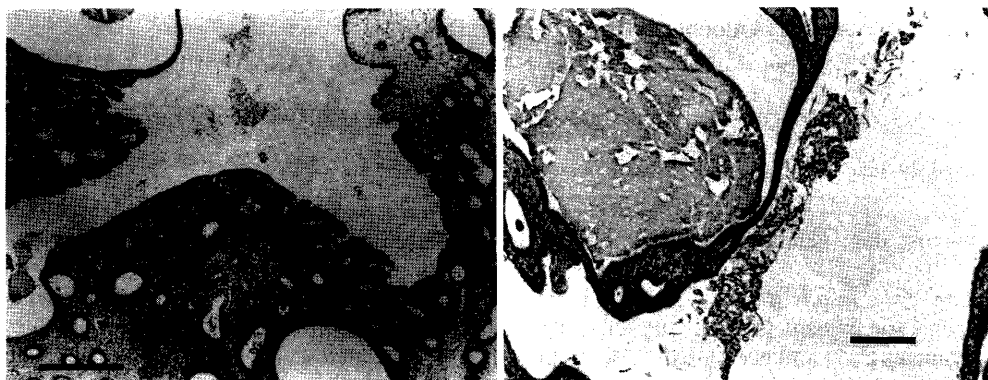


Fig. 4. Endometritis with cystic hyperplasia (a, Bar=0.5 mm) and numerous amoebae in the lumen (b, Bar=0.2 mm). HE.

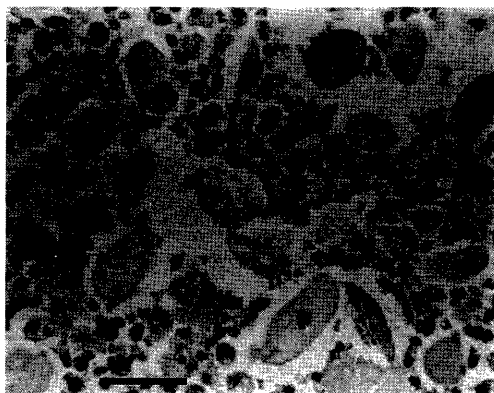


Fig. 5. Amoebae in a cervical abscess. HE. Bar=50 µm.

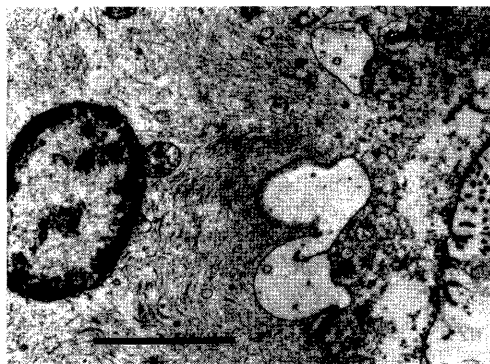


Fig. 6. Central dense karyosome and chromatin margination in the nucleus and many phagocytic vacuoles in the cytoplasm of a parasite. Electron-micrograph. Bar=5 µm.

with mucosal hyperkeratinization and dilation of endometrial glands were seen. A large number of amoebae were seen on and around ulcerative lesions of the vaginal and cervical mucosal surfaces (Fig. 1) as well as within the lumen of vaginal and uterine glands containing necrotic debris and neutrophils. The tunica muscularis was hyperplastic with some abscesses containing numerous amoebae and surrounded by connective tissue. At the periphery of these lesions hemorrhage and a number of hemosiderin-laden macrophages were seen (Figs. 2 and 3).

Endometritis with cystic hyperplasia was observed in the both uterine horns containing many amoebae in the lumen (Fig. 4). In the ovaries follicular cysts were formed with some hemorrhagic lesions. The parasites were mostly of trophozoites, which were spherical or irregular in shape and 20 to 50 µm in diameter with

pseudopodia (Fig. 5). There was no cyst type. The cytoplasm of most amoebae stained gray or red with HE and positive for PAS or Prussian blue and contained debris of erythrocytes or other necrotized cells. The cytoplasm had many microfibril and phagocytic vacuoles varying in size. A dense karyosome was seen at the center of the nucleus with chromatin margination (Fig. 6).

Amoebiasis in most species of animals was reported to be due to *Entamoeba histolytica* usually causing colitis with erosion or ulceration [5, 6]. Systemic dissemination of amoebae is rare in any animal species [5, 6] except for human cases [3, 6, 8, 10] including genital affection [4]. In the present case there were follicular cysts in the ovary, which might have resulted from abnormal hormone level due to amoebiasis in the

genital organs. Human amoebiasis has been reported to increase in severity during pregnancy [2] resulting in maternal [1, 10] or fetal [3] death, but no information is available in the present case.

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要 約

雌犬の生殖器アメーバ症の一例(短報): 安田彰典・美土路活男・中山裕之・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)——外陰部腫脹を主徴とした16歳の雌犬の生殖器にアメーバ原虫の感染を認めた。アメーバによる膿瘍および潰瘍が膣・子宮頸に多発し、嚢胞状内膜過形成を伴う子宮内膜炎を認めた。両側卵巣に嚢腫がみられ、アメーバ感染による上記病変と関係があると考えられた。