

## 犬の卵管系に発生した腺腫状乳頭腫の一例について

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## Adenomatous Papilloma of the Uterine Tube (Oviduct) Fimbriae in a Dog

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The occurrence of an uterine tube (oviduct) tumor, especially in the region of the fimbriae is rare in domestic animals [2], with the exception of poultry [4]. In Japan, this tumor has not been reported yet [9]. The common pathological lesions in the uterine tube are paramesonephric-mesonephric remnants, mesosalpinx cysts, hydrosalpinx and salpingitis [2, 4]. These changes are always associated with a disordered reproductive tract, but not related with the incidence of tumor [2]. However, ovarian tumor can occur due to hormonal imbalance [8]. Generally in middle-aged and adult animals, the fimbriae are formed as broad, flat folds with tongue-like appendages and the tubal mucosa changes markedly during the estrous cycle [6]. On the basis of histopathological findings, primary oviduct tumor can be classified into three benign types: one is purely epithelial and the other two are related to abundant connective tissue and smooth muscle [2]. Immunohistochemically the epithelial cells stain positively for keratin, which is the major intracellular intermediate-filament protein [1, 7]. This paper presents a case study of adenomatous papilloma in the uterine tube (oviduct) fimbriae of a dog by using histopathology and immunohistochemistry.

The dog used was a four-year-old female Yorkshire-terrier, which was proven to have clinical sign of enlargement of the abdomen about three months after recognition. The dog was generally healthy, except that her reproductive history (estrous cycle) was irregular, but no hormonal treatment was given. Radiographic and ultra-sound examinations revealed evidence of a mass occupying the left abdominal cavity. Cytological examination of abdominal fluid revealed normal findings. Subsequently, the dog underwent an exploratory laparotomy at a veterinary clinic. Total ovariohysterectomy was performed, removing the abdominal mass from the

left ovarian site.

Macroscopically, the mass was 8 cm in diameter, round and well encapsulated with a rough serosal surface (Fig. 1). The tumor was close to the left ovary, in the fimbrated part of the uterine tube (oviduct) (Fig. 2). A firm consistency and brownish-white color on the cut surface were noted. The tumor tissue was fixed in 10% formalin solution. Paraffin sections were stained with Hematoxylin-eosin, Mallory Azan, Alcian blue.

Microscopically, the neoplastic cells were arranged in a distinct epithelial pattern, a papilliferous arrangement of columnar epithelium (Fig. 3). Neither necrotic areas nor mitotic figures were observed. The mucinous appearance was detected along the epithelial surface in some part of the tumor tissue. Upon immunohistochemical staining [7] of paraffin-embedded sections, the neoplastic cells showed a strong reaction with rabbit anti-human keratin antiserum (Ortho Diagnostic System Inc., USA), the epithelial layers of the papillomatous structure responding positively, while the fibrous tissue stroma was negative.

The results of this study were in close agreement with the study of Gelberg, *et al.* [2] i. e., that uterine tube (oviduct) tumors were not associated with a disordered reproductive tract. The tumor was located at the fimbrated portion of the left uterine tube, possibly showing change to an abnormal outgrowth due to morphological alteration, depending upon age and sex hormones [6]. The neoplastic cells were obviously epithelial, arranged in a papillomatous proliferation of uterine tube mucosa and connective tissue, intermingling with each other, as in the benign type of adenoma described by Gelberg, *et al.* [2]. The presence of epithelial cells was further confirmed by their positive response to rabbit anti-human keratin antiserum by immunohistochemistry. Furthermore in primary tissue culture of this tumor by Hiratsuka, *et al.*'s method [3], we also obtained the epithelial cells.



Fig. 1. The rounded mass, about 8 cm in diameter, with rough serosal surface, and with a well encapsulated firm consistency. It is located adjacent to the left ovary. Both sides of the ovaries are shown (arrows).

Therefore, we concluded that this dog tumor was of epithelial origin—an adenomatous papilloma of the uterine tube (oviduct) fimbriae.

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#### 要 約

犬の卵管系に発生した腺腫状乳頭腫の一例について (短報) : Achariya Sailasuta・立山 晉・山口良二・野坂 大<sup>1)</sup>・大塚宏光 (宮崎大学農学部家畜病理学教室, <sup>1)</sup>家畜外科学教室)——4歳, 雌, ヨークシャーテリア犬が三ヶ月前より腹囲膨満の症状を呈し, 試験的開腹の結果直径8cmの腫瘤を卵管采に附着して認めた. 組織学的検索の結果, 本腫瘤は巢層の円柱上皮が腺腫状に配列した乳頭腫の形態を示した.

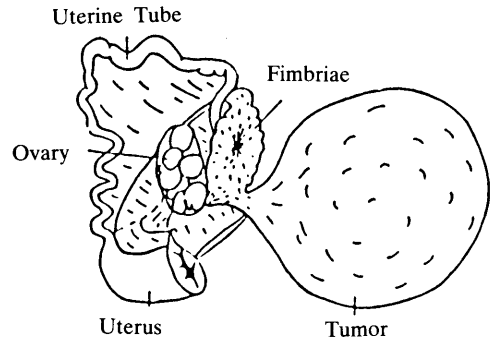


Fig. 2. The tumor was close to the left ovary, in the fimbriated part of the uterine tube.



Fig. 3. Adenomatous papilloma of the uterine tube (oviduct) fimbriae. Microscopically, the neoplastic cells are distinctly arranged in epithelial patterns; columnar epithelium lining a papilliferous fibrous tissue stroma. HE..