

# SURGICAL AND THERAPEUTIC MANAGEMENT OF BILATERAL OVARIAN PAPILLARY CYSTADENOCARCINOMA IN A MONGREL BITCH

P. Sarkar<sup>1</sup>, S. Halder<sup>2</sup>, D. Mandal<sup>1</sup> and M. Mondal<sup>3</sup>

<sup>1</sup>Assistant Professor, Department of Veterinary Gynaecology & Obstetrics, <sup>2</sup>Department of Veterinary Surgery & Radiology, <sup>3</sup>Department of Veterinary Clinical Complex; Faculty of Veterinary & Animal Sciences, W.B.U.A.F.S., Kolkata (W.B.).

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Ovarian neoplasia is uncommon in the dog with a very less incidence (1.0 to 1.4 %) reporting from all canine neoplasms. The present communication represents a rare case of bilateral ovarian cystadenocarcinoma of a 10 years old Mongrel bitch. The affected bitch had a history of anorexia, bilateral abdominal distension with mild ascites and secondary anestrus for about 18 months. Radiography revealed a huge mass inside the abdomen. Ultrasonographic images confirmed a left large and right small ovarian neoplasm contained multiple anechoic cystic structures with irregular margins. Ovariohysterectomy was performed under standard anaesthetic protocols and the bitch recovered uneventfully. Affected ovary had histopathological alterations like hyperchromatia, presence of huge number of mitotic figures with fibrous stroma which confirmed papillary ovarian cystadenocarcinoma.

**Keywords:** Mongrel bitch, Ovariohysterectomy, Ovarian Cystadenocarcinoma.

Recently ovarian neoplasm is not commonly found in dog with a reported incidence ranging from 1.0 to 1.4 % of all canine neoplasms due to high incidence of ovarioectomy/ ovariohysterectomy (Saba and Lawrence, 2013). Older dogs are commonly affected than Youngers. There is an increased incidence of left ovary neoplasm while bilateral involvement may occur with papillary adenoma or papillary adenocarcinoma (Neilsen, 1983 and Jergens and Shaw, 1987). Ovarian adenocarcinoma commonly metastatize to the perineal lymphatics causing obstruction and subsequent ascites (Jergens and Shaw, 1987). Cystadenomas are composed of multiple thin walled cysts filled with transparent fluids (Herron, 1983). Ovarian tumors cause various disorders in the sexual cycles such as anestrus, nymphomania, musculation, hyperadrenocortism and alopecia (Yamini *et al.*, 1997). The present communication reports the clinical manifestation, radiographic, ultrasonographical and pathomorphological studies along with its therapeutic and surgical management of bilateral papillary cystadenocarcinoma in a Mongrel bitch.

## Case History and Observation

A ten years old Mongrel bitch weighing 20 kg with the history of anorexia and bilateral abdominal distension was presented to the Department of Veterinary Clinical Complex, WBUAFS, Kolkata. The owner reported that the bitch was in anestrus condition for about 1.5 years. The physical examination revealed that the patient was in mild anaemic condition with normal rectal temperature (101.5<sup>0</sup> F). A hard mass was felt by abdominal palpation and apparently no discharge was found from the vagina. Haematology showed leucocytosis (15600/cu. mm) with normochromic normocytic anemia characterised by reduced number of red blood cells (4.5 X 10<sup>6</sup> cu .mm). Biochemical profile depicted mild hypoproteinaemia (4.8 gm/dL), hypoglobunaemia (2.2 gm/dL), hypoalbuminaemia (2.6 gm/dL) with normal kidney function (Creatinine-0.9 mg/dL; BUN-8.0 mg/dL). Abdominal radiography revealed the presence of an intensive homogenous shadow with round shape and indistinct borders, located caudal to the rib (Fig-1).

Real time B mode ultrasonography of whole abdomen was performed where liver, kidney and urinary bladder had normal size, shape and texture. But it showed an echogenic structure located cranial to the

urinary bladder which filled with anechogenic



**Fig-1. Radiography of abdomen showing round mass located caudal to ribs**

### Treatment

After obtaining the owner's consent, an exploratory was performed under standard anaesthetic protocol. A small amount of serosanguinous fluid was removed from peritoneal cavity. Both the ovarian masses identified where the left ovary had typical dimension and shape weighing 900 grams containing multiple superficial cystic



**Fig 3. Bilateral ovarian tumor showing marked asymmetry containing multiple cysts**

Postoperative treatment included fluid therapy, analgesics, antibiotics, antacids and multivitamins. The status of the patient was monitored daily and after 11 days skin suture was removed. After complete recovery chemotherapy was done with Vincristine sulphate @ 0.025mg/ kg body weight once weekly for three weeks after estimating blood profile.

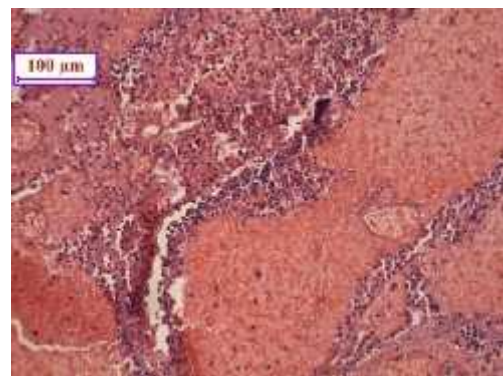
cavities with irregular margins (Fig-2).



**Fig-2. B mode ultrasonography of abdomen showing echogenic structure with anechogenic cavities**

structures (0.5-1.5 cm) (Fig 3). There was no other metastasis inside the peritoneal cavity. Finally ovariohysterectomy was performed.

Histopathological examination revealed hyperchromatia, huge numbers of mitotic figures along with plenty of fibrous stroma, moderate nuclear atypia with pleomorphism and stromal invasion (irregular/destructive infiltration by small glands), (Fig.4 ).



**Fig 4: Section of ovary showing hyperchromatia, mitotic figures, moderate nuclear atypia with pleomorphism and stromal invasion. H. & E.X10.**

### Discussion

The present communication described that ovarian papillary cystadenocarcinoma could grow without any obvious clinical manifestation except rapid abdominal swelling. Granulosa cell tumors make up most frequently in older dogs and are of the most common functional tumors which secreting estrogen, progesterone as well as -inhibin as also reported by Pluhar *et al.*

(1995), which could be related with the anestrus condition of the patient. In the present study, the uterus is hardly differentiated and visualized by USG because of the size of the tumor which corroborates the findings of previous workers Yotov *et al.* (2005). Rapid enlargement could be attributed as a sign of malignancy and it was confirmed by histopathological findings of the specimen. Due to the inadequacy of alternative therapy (Radiotherapy, immunotherapy), exploratory ovariohysterectomy was performed followed by chemotherapy with vincristine sulphate to destroy the metastatic cells if any. Control radiography was recommended after the removal of tumor mass and upto 4 months from the surgery there was no report about metastasis.

Finally it can be concluded that ovarian papillary cystadenocarcinoma in the bitch could affect both ovaries and has a rapid growth of abdominal swelling without any apparent clinical manifestation and the treatment of choice would be chemotherapy after ovariohysterectomy.

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