GRANULOMAS ON MESENTERIC LYMPH NODES IN A DOG

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[Received: 05.04.2020; Accepted: 21.11.2021]
{DOI 10.29005/IJCP.2021.13.2.71-73}

A 4-year-old female Rottweiler dog was presented to Department of Veterinary Surgery and Radiology with inappetence from the past 5 days and was unable to walk or stand consistently. On abdominal palpation, hard mass was palpable in the mid-abdominal region. Radiographic examination revealed large mass in abdomen with soft tissue radiodensity. Hyperechoic nodular masses were seen in the abdominal ultrasonography, near the region of spleen. Condition was tentatively diagnosed as splenic/hepatic/mesenteric tumor. Exploratory laparotomy was performed. Tumor masses were seen in the mesenteric lymph nodes and couldn't be excised since the tumours were multiple in number and large-sized. Incisional biopsy was performed and the abdominal wall was closed. Pet was under fluid therapy for 5 days. The histopathology report revealed granuloma and advised symptomatic treatment.
Keywords: Hard abdominal masses, Exploratory laparotomy, Mesenteric lymph node granuloma.

Exploratory laparotomies are performed to arrive at a diagnosis or for confirmation of a diagnosis and play a crucial role in emergency practice. Radiography and ultrasonography techniques aid in the diagnosis of most of the conditions, but sometimes fail to arrive at a confirmatory diagnosis. Emergency conditions like gastric dilatation and volvulus, intussusception, gastroenteric foreign body obstructions and diseases such as splenic, hepatic, mesenteric tumours, granulomas, etc have been encountered in exploratory surgeries. Ovarian remnant syndrome (Ball *et al*., 2010), mesenteric granular cell tumours (Ororbia *et al*., 2021) were encountered in patients presented with clinical signs such as lethargy, anorexia, vomiting, diarrhoea, haematochezia, and abdominal palpation arrived a tentative diagnosis of hard mass in abdomen. Although vomiting and diarrhoea was absent in the discussed case, the animal was anorectic, lethargic and dehydrated. Abdominal palpation, radiography and ultrasonography suggested the presence of tumour-like masses in the abdomen.

Gastrointestinal granulomas were reported in parasitic infestations, bacterial, viral and fungal infections. Mesenteric and mesenteric lymph node granulomas were identified in animals with fungal infections such as abdominal cryptococcosis (Johnston *et al*., 2020) and systemic candidiasis (Matsuda *et al*., 2009). In Circovirus infection in a dog (Li *et al*., 2013) and in idiopathic mesenteric and omental steatitis in a dog (Komori *et al*., 2002) mesenteric lymph node granulomas were encountered.

Case History and Observations

A 4-year-old female Rottweiler dog was presented to the Department of Veterinary Surgery and Radiology of Veterinary College, Hebbal with a complaint of anorexia from the past 5 days. The animal was weak and unable to stand or walk consistently. The animal was able to urinate and defecate normally. Vital parameters were within the normal range. Abdominal palpation revealed a hard mass in the mid-abdominal region. Radiographic examination revealed a large mass in the abdomen with soft tissue radiodensity. Since the animal had a history of pyometra and ovariohysterectomy had been performed for the same, stump pyometra was suspected, and ruled out by ultrasonographic examination. Hyperechoic nodular masses were seen in the abdomen near the region of spleen (Fig.1). Splenic/ hepatic/mesenteric tumor was suspected and exploratory laparotomy was undertaken.

Surgical Treatment

The dog was pre-anaesthetized with Atropine sulphate (0.04 mg/kg body weight S/C) and Xylazine hydrochloride (1mg/kg body weight I/M). The general anaesthesia was given with Thiopental sodium (2.5%) at 12.5 mg/kg body weight, one-third of the dose

was given for induction, and anesthesia was maintained by giving the remaining dose as boluses.

The dog was positioned in dorsal recumbency. A cranial mid-ventral celiotomy was performed. Multiple large tumor masses were identified in mesenteric lymph nodes, and one showed attachment to the spleen, mesentery, and intestinal segments (Fig: 2 and 3) and couldn't be excised since they were multiple in number and large-sized. Sample was collected for biopsy and sutured using Chromic Catgut No. 2-0. Surgical incision was closed in a routine manner.

Fig.1 Hyperechoic nodular masses seen in the abdominal ultrasonography

Fig. 2 Masses seen in the mesenteric lymph nodes

Fig. 3 Showing attachment of tumor mass tospleen

Results and Discussion

Postoperatively, Cephalexin (25mg/kg orally BID for 7 days) and Carprofen (2 mg/kg orally SID for 3 days) were administered. Later the condition was diagnosed as granuloma through histopathological examination. Evidence of malignancy or bacterial colonies were not reported. Haematological parameters were in normal range. Granuloma was considered as idiopathic origin. Medical treatment was advised for palliative care as radical surgery could not be performed. In a follow up after 2 months animal was presented as active and healthy.

Surgical excision of granulomas or debulking of accessible abnormal tissues could be done in early stages and systemic medical therapywith antifungals or antibiotics could be tried depending on the pathogen involved. Medical therapy was recommended to treat residual disease even if gross disease was removed completely. Patients with perceived poor prognosis could be euthanised or supported with palliative treatments.

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