Journal of Entomology and Zoology Studies

Available online at www.entomoljournal.com

Journal of Entomology and Zoology Studies

E-ISSN: 2320-7078
P-ISSN: 2349-6800
www.entomoljournal.com
JEZS 2020; 8(2): 1293-1294

Received: 19-01-2020
Accepted: 21-02-2020

Rakshith Kumar
Graduate Student, Department of Veterinary Pathology, Veterinary College, Bangalore, Karnataka, India

Koushiek Yadav
Graduate Student, Department of Veterinary Surgery and Radiology, Veterinary College, Bangalore, Karnataka, India

Jeevan K
Department of Veterinary Pathology, Veterinary College, Bangalore, Karnataka, India

Hemanth I
Department of Veterinary Pathology, Veterinary College, Bangalore, Karnataka, India

Suguna Rao
Professor, Department of Veterinary Pathology, Veterinary College, Bangalore, Karnataka, India

Mayasandra L Satyanarayana
Professor, Department of Veterinary Pathology, Veterinary College, Bangalore, Karnataka, India

Corresponding Author:
Rakshith Kumar
Graduate Student,
Department of Veterinary Pathology, Veterinary College, Bangalore, Karnataka, India

Case report on trichophagia in dog: A rare condition

Rakshith Kumar, Koushiek Yadav, Jeevan K, Hemanth I, Suguna Rao and Mayasandra L Satyanarayana

Abstract
A carcass of male mongrel puppy was presented for post mortem with the history of anorexia, swollen face and abdominal bloat. On treatment with deworming suspension on previous day, the puppy had showed severe contractions of abdomen, excreted thread like structures and died. During post mortem, the carcass appeared weak and poor in condition. Upon exploratory celiotomy, the stomach revealed bundles of thread like structures. Microscopic examination of the same confirmed as hair filaments and negative for parasitic worms, concluding as death due to allotriophagia.

Keywords: Puppy, necropsy, pica, trichophagia

Introduction
Pica or allotrophagia is a disease condition of depraved appetite, where human and animals start ingesting objects that are inedible [1]. It is an eating disorder characteristically defined as persistent ingestion of non-nutritive substances. The word pica is a Latin name for 'magpie', a bird which is known for its indiscriminate and unusual eating habits. Individuals who present with pica have been reported to mouth or ingest a wide variety of non-food substances, including, but not limited to hair (trichophagia), rocks (lithophagia), dirt (geophagia), paper (xylophagia), cloth, mulch and even faeces [2]. In most cases, pica is a compulsive behaviour problem. The condition is commonly seen in cattle and buffaloes, rarely in other animals such as dogs, pigs, horses and goats. Lactating, pregnant and young cattle are especially liable to develop this condition [4]. Pica is also frequently seen in human. According to Dorland's Illustrated Medical Dictionary pica in humans is compulsive eating of non-nutritive substances, such as ice, dirt gravel, flaking paint, clay, hair or laundry starch. Pica and unusual food cravings (citta) are common in pregnant women and can occur in some patients with iron or zinc deficiency [3]. In children this syndrome, classified as the eating disorder in DSM-III-R, is a rare mental disorder with onset typically in the second year of life which usually remits in childhood but may persist into adolescence.
The reasons of pica in animals are not well stated. Perverted appetite or licking on surface indicates lack of nutrients in ration or it can be a vice or bad habit. The probable reason is indigestion and dietetic errors that are difficult to specify. It has been suggested that insufficiency of soda salts or phosphates in food may cause this problem [7, 8]. Trace element deficiencies leading to pica in farm animals impose economic losses in the form of reduced milk yield, retarded growth, infertility and death by foreign body syndrome [5].

Case report
A carcass of 2 months old male mongrel pup was presented for post mortem examination with a history of complete inappetence followed by recumbence for 3 days. Pet was dull and had distended abdomen. There was no history of vaccination and deworming. Previously pet was treated for anorexia and bloat condition which was unsuccessful. Conservative treatment was given to stabilize the pet health. Upon feeding of deworming suspension, after few hours, severe abdominal contractions were observed and pet strained to excrete a ball of thread like structures and subsequently died.
During post mortem examination, externally the carcass was dehydrated and was poorly built. Rigor mortis was setting in. The conjunctival and oral mucus membranes were pale indicative of anaemia. There was mild infestation of flea on the body.

Hair coat was shabby and brittle. Abdomen was distended and had "pot belly" appearance. No external wounds were appreciated. Development of muscles was poor. Upon exploratory celiotomy, the stomach was filled with bundles of thread like structures with mild amount of frothy fluid. The structures were limited to stomach and were not extended in to intestine. Other vital organs appeared to be normal with no specific lesions.

Microscopic examination of suspected stomach structures revealed hair filaments, and was negative for parasitic worms. Hence, it was concluded as death due to ingestion of hairs, leading to impaction of stomach.

Fig 1: Puppy excreting ball of hair filaments through anus.

Fig 2: Presence of bundles of hair filaments in the stomach.

Discussion

Pica is uncommon in dogs. Whilst the causes of pica are unknown, many hypotheses have been indicated to explain the phenomenon, ranging from psychological causes to causes of purely biochemical origin. Few suggested causes are nutritional deficiencies, stress, non-discriminating oral behaviour, learnt behaviour and underlying biochemical disorder. Deficiencies of iron, calcium, zinc and other nutrients like thiamine, niacin and Vitamins C and D are also associated with pica. Malnutrition and hunger may also result in pica. Animals generally clean themselves by licking, to keep the fur clean and untangled. Dogs and cats use licking to show affection among them. During nursing period cow licks her calf. Many animals display licking as a submissive or appeasement sign in dominance hierarchies. Some animals lick themselves for thermoregulation, as like in cats.

Considering this case, the rescued pet appeared weak, and poorly built. Initially, the disease was diagnosed as common behavioural problem and treated for inappetence. Anti-flatulent was given to relieve bloat. Conservative treatment was given with fluid therapy to stabilize the pet. On feeding of deworming suspension, the pet displayed severe colic signs and strained to excrete ingested hair and died. Upon post-mortem, there was poor muscle development, atrophy of intestine, stasis of bile in the gall bladder. The gastrointestinal tract was empty except with the ingested thread like structures which indicated inanition with impaction of stomach contributing for death of the animal. As trichophagia was not reported by pet owner, gross observation of excreted thread ball was presumed to be parasitic worms. However, it was diagnosed as hair after microscopic examination. Hence, the present case represents the condition of pica.

References

1. Akgul Y, Agaoglu, ZT, Kaya A, Şahin T. The Relationship between the Syndromes of Wool eating and Sheep Fed Corn Silage and Blood Changes (Haematological, Biochemical and Trace Elements). Israel Journal of Veterinary Medicine. 2001; 56(1):12-16.
2. American Psychiatric Association. Diagnostic criteria from dsM-iV-tr. American Psychiatric Pub, 2000.
3. Anderson, DM, Dorland's Illustrated Medical Dictionary. 8th Ed., WB Saunders Co. Philadelphia, USA. 1994.
4. Firyal S. Pica (depraved appetite; allotrophagia) in domestic animals and man. Pakistan Veterinary Journal. 2007; 27(4): 208.
5. Lengare AS, Bhikane AU, Ghoke SS, & Awaz KB. Pica in Buffaloes with special reference to its etiology and treatment. Intas Polivet. 2012; 13(1):62-66.
6. Radostits, Otto M, Gay CC, Hinchcliff KW, and Constable PD. Veterinary Medicine 10th edn. Saunders Elsevier, Philadelphia, 2007.
7. Smith, JW, Adebowale EA, Ogundola FI, Taiwo AA, Akpavie SO, Larbi A, Jabbar MA. Influence of minerals on the aetiology of geophagia in peri urban dairy cattle in the derived savannah of Nigeria. Tropical animal health and production. 2000; 32(5):315-327.
8. Whitlock RH, Kessler MJ, Tasker JB. Salt (sodium) deficiency in dairy cattle: polyuria and polydipsia as prominent clinical features. Cornell Vet. 1975; 65(4):512-526.