TOXICITY OF CHOCOLATE IN A LABRADOR DOG:
A CASE REPORT

Sarita Devi¹, K.M. Jadhav² and R.D. Singh³

¹Assistant Professor, ²Professor & Hcad, Department of Medicine; ³Assistant Professor, Department of Veterinary Pharmacology and Toxicology, College of Veterinary Science & A.H., Sardarkrushinagar Agricultural University; Dantiwada, Gujarat.

[Received: 28.8.2015; Accepted: 15.3.2016]

The Chocolate toxicity affects many organs/systems and dogs of all ages are susceptible. A two-year old Labrador male dog was presented with history of restlessness, emesis and convulsions. Dog had a history of ingestion of dark chocolates in excess amount. History and clinical signs suggested the condition to be acute chocolate toxicity which was successfully managed with the use of rehydrated fluids atropine sulphate and activated charcoal, along with other supportive medication. The complete recovery was uneventful.

**Key words:** Chocolate toxicity, Labrador dog

Dogs are usually accidentally exposed to potentially toxic household products and medications. Also sometimes owners unintentionally give their dogs harmful products or medications. Dogs are considered as commonly affected species for poisoning making up to 70–80% of all animal cases because of their indiscriminate eating habits (Gupta, 2007). Rodenticides, chocolate (approximately 25% of exposures) and pharmaceuticals (22% of exposures) make up the common substances involved in poisoning in canines (Cope et al., 2006). They are exposed to a wide variety of chocolate and cocoa products, especially at festive occasions due to feeding by children or owner which may result in potentially fatal cardiac arrhythmias and CNS dysfunction (Stidworthy et al., 1997; Beasley, 1999).

**Case history and Observations**

A two year old male Labrador dog (body weight: 26 kg) was presented with history of restlessness, emesis, hyper salivation and convulsions. Dog had a history of accidental ingestion of approximately half of the dark chocolate (packet of 15 gm) eight hours ago. Detailed clinical examination revealed dehydration (STT > 5 second), rise in body temperature (104.0°F), increased respiration (39/min), tachycardia (heart rate 146/min), hyperesthesia and muscle tremors. Peripheral blood smear and fecal sample examination did not reveal any abnormalities. Hematological findings were haemoglobin (14 g/dl), TLC (9000/cmm), TEC (5.9 x 10⁷/cmm) and, PCV (40%) and in DLC neutrophils (62 %), lymphocytes (27 %) and eosinophils (2 %). Based on owners complaint and clinical signs condition was diagnosed as acute chocolate toxicity.

**Treatment**

The case was initially managed with Inj. DNS @ 20 ml/kg b.wt, I/V, Inj. Atropine Sulphate @ 0.045 mg/kg b.wt, Inj. Amoxicillin and Cloxacillin @ 25 mg/kg, I/M, BID, Inj. Ranitidine @ 0.5mg/kg b.wt, I/M, Inj. Diazepam @ 0.5 mg/kg b. wt, I/V and activated charcoal @ 1gm/kg b.wt orally. It was advised to continue oral activated charcoal (as adsorbent) at every 4-6 hours interval for next twenty four hours. Drugs mentioned above were continued till four days, until complete clinical recovery.

**Results and Discussion**

Since the dog was brought timely to clinics, it responded well to the treatment. Salivation and excitement were reduced makedly. The complete recovery was uneventful.

Chocolate is derived from the roasted seeds of Theobroma cacao which contain toxic principles viz methylxanthines, viz. theobromine and caffeine. Theobromine is more toxic as dogs metabolize it much more slowly than humans. Its action is through competitive inhibition of cellular adenosine receptors, leading to vasoconstriction, diuresis, tachycardia and CNS stimulation as
also recorded by Serafin (1996). Chocolate toxicity is more dependent on the amount of chocolate ingested rather than on the type of ingested chocolate as also reported by Luiz and Heseltine (2008). The chocolates having darker or richer cocoa solids are more dangerous. The LD₅₀ of caffeine and theobromine for dogs is 100-500 mg/kg as also mentioned by Carson (2006). Cardiotoxicosis may occur in dogs ingesting 40 mg/kg and dogs ingesting more than 60 mg/kg may exhibit severe CNS signs, such as tremors and seizures as also reported by Gwaltney (2001). Clinical signs usually occur within six to 12 hours of ingestion as also mentioned by Beasley (1999). Hooser and Beasley (1986) reported that the chocolate toxicity in dogs shows clinical signs of restlessness, hyperacidity, mild hyperesthesia, emesis, diarrhea, stiffness, muscle twitching, tonic to tetanic convulsions, polypnea, tachycardia and hyperthermia; similar clinical findings were seen in the present case also. Use of oral activated charcoal was effective because theobromine show enterohepatic recirculation as also mentioned by Plumb (1990).

References