



Foreign Body Syndrome in Small Animals

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One of the major conditions affecting the animals, both large and small, in which the animal exhibits symptoms of distress, discomfort and uneasiness is Foreign Body Syndrome. This syndrome is a group of symptoms exhibited by the affected animals and they will vary depending upon the location in which the foreign body is located. This, in extreme cases, may, at times caused death of the animal and hence requires immediate attention and treatment, either medical or surgical line. Almost in all cases, wherein the treatment is adopted at proper time, the animal survives, without much chance of further complications. The foreign body syndrome caused by various foreign bodies in different organs in the case of small animals is described below.

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The foreign body referred above, includes a grass seed in the ear, nose, beneath the skin, between the toes or beneath the eyelid, in the prepuce or penis, a needle embedded in the tongue, a chop bone wedged in a dog's mouth, pebbles in a dog's stomach, lead shot and air gun pellets.

The most important symptom in Foreign body syndrome is due to foreign bodies present in the esophagus, external ear canal, stomach and also foreign body

pneumonia. As far as small animals are concerned, foreign bodies in the mouth, oesophagus, pharynx, intestine, stomach etc. are more important than those in other organs. Foreign bodies may also be present in bladder, urethra, trachea, rectum etc.

Foreign bodies in external ear canal: This is more common in dogs than in cats, particularly in long haired pendent-eared breeds. Grass awns creep into the funnel like ear canal and may finally lodge against the tympanum. Other foreign bodies occasionally found in the ear include weeds, sticks, hair, insects, ticks, dirt and the spinose ear tick *Ornithodoros megnini*.

Treatment: Thorough examination with an otoscope and deeply located foreign bodies should be removed with alligator forceps operated through the speculum of otoscope. If a consequent otitis persists, it should be treated after removing the foreign body.

Foreign body pneumonia: This is a form of pneumonia characterized by pulmonary necrosis and caused by the entry of foreign material into the lungs. Faulty administration of medicines is the most common cause. Aspiration of saliva or vomitus during anaesthesia while the cough and swallow reflexes are lost is also a cause. In cats and dogs, there will be elevation of temperature. Pulse is accelerated and respiration is rapid and laboured.

Treatment: Treatment consists of the use of sulfonamides or antibiotics. Broad spectrum antibiotics are preferred. In dogs and cats, oxygen therapy may be beneficial.

Foreign bodies in the eye: A most frequent cause of unilateral conductivities is the presence of a foreign body in the form of seeds of a weed or thorns. In most instances, the object is embedded behind the membrana nictitans or in the lower conjunctival cul-de-sac. Severe irritative symptoms are to be observed, and corneal ulceration will almost invariably result unless the foreign body is promptly removed.

Treatment consists of topical instillation of ophthalmic anaesthetic, allowing sufficient time for it to become effective. The membrana nictitans is grasped with thumb forceps, and pulled up and away from the eyes. The object may then be lifted free, with suitable forceps. Following removal, a soothing ointment should be applied.





Foreign bodies in lips: Foreign bodies in lips produce lesions at the commissures or edges of the lips, which are hairless, hyperaemic and possibly abraded. Awns, porcupine quills or thorns are common and produce draining fistula of lips.

Foreign bodies in mouth: Foreign bodies account for most cases of stomatitis in dogs. Bone or wood splinters, needles, awns etc. are most frequently involved. Injury of oral mucosa, usually results in secondary infection. There will be excessive salivation, anorexia and malodorous breath. Foreign bodies should be removed and mild astringent antiseptics should be used for washing. Foreign bodies wedged between the teeth may cause intense discomfort to the animal and in consequence, alarming symptoms of acute nervous excitement may develop. A radiological examination of mouth will reveal the presence of foreign body.

Foreign bodies in pharynx: Perforating foreign bodies like awns, pins, needles, wood splinters and bone chips are often seen in the pharynx of dogs. The conular crypts, posterior pillars of mouth and poster lateral aspect of pharynx are the usual locations of these objects. Swallowing is usually difficult and painful. Anorexia is often seen, gagging type of cough is typical. Increased salivation may accompany dysphagia. Radiography helps in diagnosis. Foreign bodies should be located and removed as soon as possible. It is generally easier to remove the object by pharyngeal approach than by an external surgical approach.

Foreign bodies in oesophagus: A variety of foreign bodies find their way into the oesophagus of dogs and cats. Bones, needles, rubber balls, fish hooks and sticks are among those most often encountered. These objects usually lodge in the anterior cervical portion, just behind the pharynx or in the thoracic inlet or just anterior to the hiatus oesophagi.

Salivation, retching and extension of neck are constant signs of cervical foreign bodies. When a complete obstruction exists, immediate vomiting follows the intake of food or water. Partial obstruction permits the passage of fluids, but not solids so that solids are regurgitated. Dysphagia resulting from Oesophagitis is often the outstanding symptom of small, sharp, non obstructive objects.

Diagnosis can be done by radiography, local external palpation, Oesophagoscopy etc. If the foreign body is in the upper portion of the oesophagus, near the pharynx, it can be removed with forceps. If it is not too large, it can be made to move down to stomach by inducing the animal to swallow mineral oil. Foreign bodies with sharp edges should not be pushed down the oesophagus, small

soft objects may be regurgitated following injection of apomorphine. It is sometimes necessary to perform gastrotomy and then remove the offending foreign body in the oesophagus. Oesophagotomy can also be resorted to.

Gastric foreign bodies: The playful habits and curiosity of dogs and cats may result in their swallowing any objects like rubber balls, stones, bones etc. Because of their licking habit, cats often swallow large amounts of hair, which may form a mass in the stomach. A deprived appetite such as that associated with Rabies, pancreatic disease, avitaminosis or mineral deficiency causes animals to ingest substances.

Intermittent vomiting after ingestion of solid food, marked loss of condition, symptoms of gastritis, haematemesis due to sharp objects etc. are the common symptoms. Sharp objects cause peritonitis with consequent abdominal pain and fever.

Diagnosis can be made based on history, physical examination or by Roentgenography. Apomorphine may be given to cause expulsion of small smooth objects. Small objects can sometimes be removed with forceps through a gastroscope. Small sharp objects can be made to pass safely through a gastroscope. Small sharp objects can be made to pass safely through intestinal tract by feeding small balls of absorbent cotton which have been mixed with meat or bread or packed into gelatin capsules. Hair balls are usually passed in faeces after administration of one or two doses of mineral oil. Gastrotomy may be performed with adequate post operative care, including parental injection of antibiotics.

Foreign bodies in Intestine: Fragments of bone, parts of rubber toys, baby nipples, pieces of wood and stones are the most common materials causing intestinal obstruction. They may lodge anywhere in small intestine, but are more commonly seen in ileum. Symptoms include vomiting within a very short time after eating. Dehydration, icterus and absence of bowel movements noticed. Treatment is by surgical intervention.

Foreign bodies in rectum: A number of types of foreign bodies, such as needles, bones and various other sharp objects can traverse the entire alimentary canal and lodge in the rectum. This is one of the most common cause of proctitis. Symptoms include unproductive tenesmus. Treatment is aimed at eliminating the cause by removal of foreign body while providing symptomatic relief through soothing enemas with coating agents and other anti-inflammatory products.

Foreign bodies in the nose: The entry of foreign material into the nasal passages of dogs is relatively





common. It is not uncommon to find sticks, awns and different grasses in the nose. Sneezing, the outstanding symptom of foreign body irritation, occurs with great frequency and sometimes in paroxysms. There is usually an accompanying nasal discharge. Treatment is surgical. Any medical treatment is unavailing. Thorough examination with an otoscope is often necessary before the offending object can be found.

Tonsillar foreign bodies: These are relatively uncommon, but they do occur. There are reports of lodging of bones, needles, and other foreign bodies between the tonsil and the wall of tonsillar sinus. It begins as a unilateral inflammation.

Laryngeal foreign body: Foreign bodies rarely become lodged in the larynx. However, the lodging of grass may occur and cause great distress. The signs include vomiting, retching and frequent bouts of coughing.

Foreign bodies in the Trachea: Tracheal foreign bodies are not common in clinical situations. When they do occur, foreign bodies are usually small enough to pass beyond the tracheal bifurcation with the subsequent development of inhalation pneumonia. When foreign bodies are reasonably large, they are likely to come to rest at the tracheal bifurcation.

Features include stridor and rattling in the throat, chronic cough, respiratory distress and pulmonary oedema in more advanced cases. Diagnosis can be made by radiography. The patient should be held upside down and shaken vigorously to dislodge the foreign body. If it is unsuccessful, tracheotomy may be performed.

Foreign bodies in bladder and urethra: Most foreign bodies found in the bladder or urethra occur as a result of a gunshot or air pellet wound. Clinical signs of foreign bodies are similar to those of cystitis or cystic calculi. Surgical removal followed by treatment with urinary antibiotics is desirable because, calculi formation, chronic cystitis or urethral obstruction may occur. Diagnosis of the condition can be made by X-ray examination.

To conclude, I may suggest that, in all cases of foreign body syndrome, due to the distressing symptoms shown by the animal, it is always necessary to have an immediate attention. Treatment should be directed to remove the offending foreign body, either medically, using apomorphine to expel it out, or mechanically by removing with forceps or surgically by opening the organ affected. The prognosis is usually fair to good.



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agents like formaldehyde, alkylating agents, Aziridine compounds etc. For better immune response with killed vaccine, this type of vaccines are usually incorporated with substances called adjuvants like aluminium hydroxide, mineral oil etc.

Inactivated vaccines are commonly used in debilitated or immunosuppressed animals, colostrum deprived neonates, pregnant bitches etc. The advantages of these vaccines include no reversion of virulence and increased activity with added adjuvants. But these types of vaccines has to be given at least 2 doses at 3-4 weeks apart. Immunity produced will be of shorter duration than live vaccines and high antigenic mass is needed.

Common inactivated vaccine in canine practice include rabies vaccine, canine coronavirus vaccine, Leptospira bacterins, Infectious canine hepatitis (CAV-1) and canine parvoviral vaccine.

Points to be remembered for preventing common infectious diseases in dogs

1. The dog breeder should see that all the pups in a litter are sucking sufficient colostrum. Colostrum feeding transfers maternal antibodies to young one, which takes care of the pups during first few weeks against the diseases for which the mother is immune.
2. The pets should be dewormed as per the direction of a veterinary doctor before immunization. Every 2 weeks interval as long as the pup is with mother, once in a month until the pup is six month old and once in 3 months for adult dogs.
3. The pups should be healthy at the time of immunization. If you are immunizing your pet in diseased condition, proper immune response will not be there and the pet will succumb to the disease on exposure.
4. The primary immunization will take 2-3 weeks time for the development of protective level of antibodies. So vaccination has to be carried out as per the schedule of immunization, rather than waiting for an outbreak for vaccinating your pups.
5. Ensure that you are using potent vaccine. Try to collect the vaccine directly from the wholesale dealer. See that cold chain is maintained till the point of administration. Use disposable syringe for each vaccination. For proper vaccination, see that your pet is vaccinated by a qualified vet than a quack.
6. Feed your dogs with balanced diet. Provide fresh clean water always in clean vessel.
7. Ensure that the kennel and surroundings are kept clean.
8. Pups from immunized dams or pups deprived of colostrum can be vaccinated even at the age of 2-4 weeks.
9. Kennel cough caused by *Bordetella bronchiseptica* also can be prevented by vaccination, But vaccine is not produced in India.

