

VIDEO ENDOSCOPIC RETRIEVAL OF FISH BONE FROM OESOPHAGUS OF A DOG WITH SUBCUTANEOUS EMPHYSEMA

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A ten months age old non descriptive bitch was referred to the Veterinary College and Research Institute, Namakkal Hospital with subcutaneous emphysema all over the body. It was reported to have been fed with fish four days earlier. The animal had cough, dysphagia and vomiting. Thoracic radiographs showed diffuse subcutaneous emphysema, along with presence of the radiolucent foreign body in the cervical oesophagus. Video endoscopy revealed presence of the fish bone in the cervical oesophagus. Fish bone was retrieved using endoscopic snare without any complication. Dog was administered with the amoxicillin - cloxacillin, pantoprazole and dextrose normal saline twice daily for three days and had uneventful recovery following treatment.

Keywords: Dog, Endoscopic retrieval, Fish bone, Subcutaneous emphysema, Oesophagus.

Oesophageal foreign bodies caused trauma to the thoracic oesophagus which might result in pleuritis, mediastinitis, pyothorax, pneumothorax or oesophageal stricture (Jankowski *et al.*, 2013). Generalised subcutaneous emphysema may occur traumatically, iatrogenically or spontaneously (Malliari *et al.*, 2014). The most common causes of subcutaneous emphysema are rib fractures, parenchymal lung wound and oesophageal trauma (Thompson *et al.*, 2012). Perforation of the cervical oesophagus may result in local abscessation, subcutaneous emphysema, pleuritis, mediastinitis, pneumothorax, bronchoesophageal fistula formation or aortic oesophageal fistula formation. Subcutaneous emphysema had been reported in dog, cat, horse and human due to tracheal perforation. This article reports subcutaneous emphysema in a dog subsequent to choke due to oesophageal foreign body.

Case History and Observations

A ten months aged non descriptive bitch was referred to Veterinary College and Research Institute, Namakkal, Hospital for subcutaneous emphysema throughout the body. It was reported that dog was fed with fish and cooked rice four days earlier and it developed subcutaneous emphysema over the body approximately 3 - 4 hours following ingestion of fish. Emphysema was initially involving thoracic region and later on it

spread over to abdominal region and extremities. The dog was treated for the emphysema by veterinarian in their home town without success. Clinical examination revealed cough and dysphagia. Haematobiochemical parameters were within the normal limits except for elevated PCV. Thoracic radiographs showed presence of the radiolucent foreign body in the cervical oesophagus (Fig.1) and diffuse subcutaneous emphysema (Fig.2).

Treatment and Discussion

Dog was subjected to video endoscopy under general anaesthesia using propofol (@ 4 mg/kg body weight I/V after glycopyrrolate premedication (0.02 mg/kg body weight, S/C). A piece of fish bone in the cervical oesophagus, stretching the wall of the oesophagus was appreciated through endoscopy (Fig.3). While, tracheal collapse was also noticed as an incidental finding. Under endoscopic guidance, fish bone was retrieved using foreign body retrieval snare without any complications. Retrieved bone was irregular shaped and was about 4cm in length (Fig.4). Bitch was administered with amoxicillin - cloxacillin (@ 20 mg/kg body weight, BID), dextrose normal saline (10 ml/kg body weight, I/V.) and pantoprazole (@ 0.5 mg/ kg body weight) twice daily for five days. The dog recovered uneventfully following therapy.

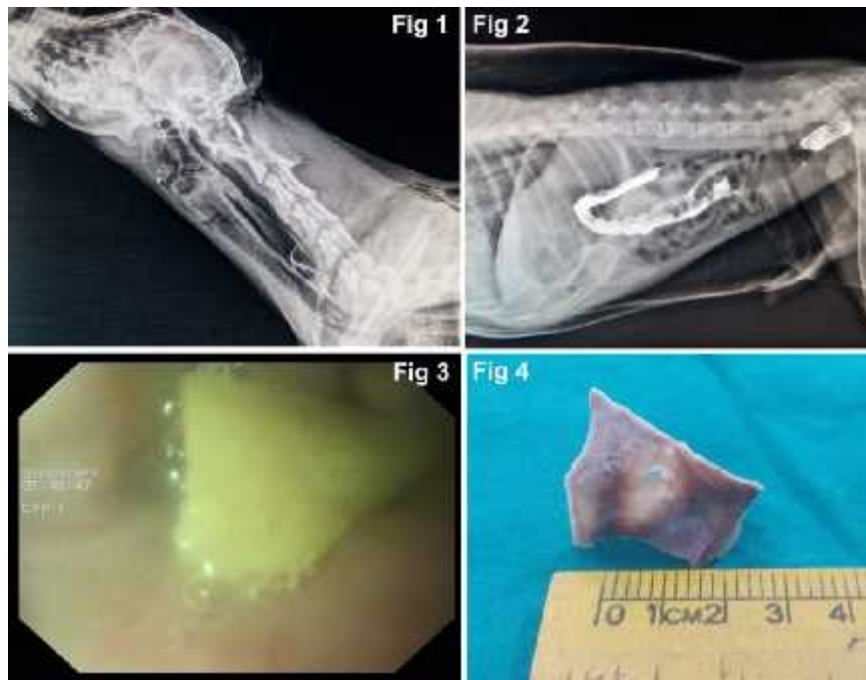


Fig.1. Lateral radiography showing radio-opaque foreign body in the oesophagus. Fig.2. Lateral radiography showing subcutaneous emphysema Fig.3. Oesophagoscopy: Bone in the oesophagus Fig.4. Retrieved fish bone

In the present study, pneumomediastinum and pneumoretroperitoneum were detected in radiograph. Pneumomediastinum was characterised radio-graphically in lateral view by visualization of mediastinal structures that were not normally seen, such as oesophagus and great vessels of cranial mediastinum, because the presence of air within the mediastinum, provided excellent contrast to adjacent soft tissue structures. With the smaller amounts of mediastinal gas, the changes were less dramatic and the only abnormality might be visualisation of the adventitial surface of the trachea as also reported by Thrall (2013).

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