

Chest tube placement for management of traumatic pneumothorax in a bully dog

Nikita Gupta¹, S.K. Mahajan^{2†} and Vandana Sangwan³

Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana-141004 (Punjab)

¹PG scholar, ²Professor, and ³Associate Professor, Department of Veterinary Surgery and Radiology, College of Veterinary Science, Ludhiana.

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A 5-yr-old intact male Bully dog, weighing 30 kg was presented with a history of severe respiratory distress, subcutaneous emphysema over the entire body and inappetence after being trampled by a bull. Clinical examination revealed tachypnea (respiration- 240 breaths/min), flail chest in left hemithorax and muffled heart on auscultation.

Thoracic radiographs (right lateral and ventro-dorsal) revealed pneumothorax, characterized by elevated heart and increased radiolucency of pleural space (Fig. 1). Pneumothorax was more pronounced in right hemithorax with collapsed middle and caudal lung lobes. Radiographs also revealed pneumo-mediastinum, fracture of 11th and 12th ribs and subcutaneous emphysema on right side.

Emergency Ryle's chest tube (18FG) was placed in the left 6th ICS under local analgesia. Since the dog has permeable mediastinum, chest tube placed on either side allows drainage of both hemi thoraces (Fossum, 2012). The dog was restrained in right lateral

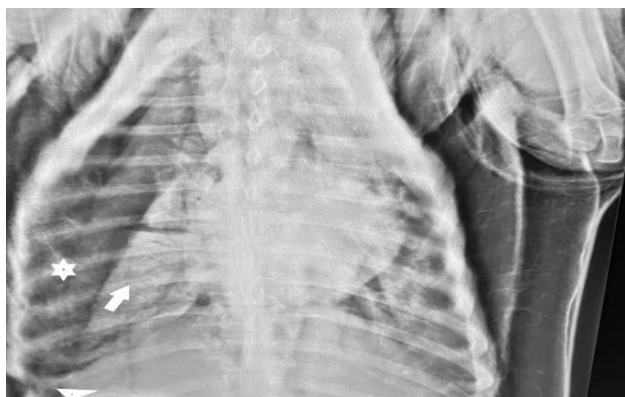


Fig. 1: VD view showed increased radiolucency of pleural space, collapsed lung lobes, fractured 11th and 12th ribs.

recumbency and lateral side of left hemithorax was aseptically prepared at 2 sites i.e., dorsal third of 10th ICS and ventral third of 6th ICS. Both the sites were aseptically prepared and infiltrated with 2% lignocaine. A small skin incision was made at 10th ICS and the tube was advanced from this site in cranioventral direction up to the level of approximately 6th ICS, from where the tube was stabbed into the pleural space. The tube was then secured at 6th ICS with purse string sutures and with Chinese finger trap at 10th ICS (Fig. 2). The trapped air was suctioned out using a syringe and a 3-way stop cock.



Fig. 2: Ryle's chest tube placed in pleural space of dog.

Immediate postoperative radiograph showed chest tube in place and reduction in pleural air. Postoperatively, frequent drainage of about 200 mL of air was done every 1 hr for next 24 hr and the dog was administered with cefotaxime (20 mg/kg body wt) and dexamethasone (0.2 mg/kg body wt) for 5 and 3 days, respectively. The chest tube was kept in place for three days and follow up radiographs were taken at 24 hr and at 72 hr, which revealed near complete resolution of pneumothorax.

[†]Corresponding author; E-mail: skmahajan73@yahoo.co.in