



## **EMERGENCY MEDICINE:**

### **Traumatic Pneumothorax**

<b>Definition</b>	Traumatic Pneumothorax is caused by a blunt force injury that causes air to be present in the pleural cavity. More specifically, it is a sudden increase in intrathoracic pressure which ruptures pulmonary parenchyma. Pneumothorax can be classified as open, closed or tension.
<b>When to consider it</b>	Consider this condition in any case of traumatic thoracic injuries such as hit by car, penetrating bite wounds, gunshot wounds, or fractured ribs which lacerate the lung.
<b>Signs and symptoms</b>	Patients may present with acute dyspnea with rapid and shallow breathing, however some animals may be asymptomatic. Dorsally there is a decrease in respiratory sounds and heart sounds. Hyper-resonance may be noted on percussion. The degree of compromise will depend on other pulmonary injuries or the amount of lung collapse. Open pneumothorax will be obvious on initial examination as there will be an audible flow sound during inspiration. With tension pneumothorax a barrel-shape chest may be noted.
<b>Diagnosis</b>	Three view thoracic radiographs can be taken once the patient is stabilized, although a thoracocentesis may need to be performed prior to radiographs. Typical radiographic signs on the lateral include elevation of the cardiac silhouette off the sternum, increased lung lobe opacity resulting from collapse of a lung lobe, retraction from the chest wall and in the caudal thorax, radiolucent free air with no evidence of pulmonary vasculature. If radiographs are unavailable or unclear, removal of free air is diagnostic for a pneumothorax.
<b>Treatment</b>	Traumatic pneumothorax most commonly resolves without surgical intervention. Thoracocentesis on both sides of the chest will remove the extrapulmonary air allowing the lung to re-expand. The air should be measured, as further thoracocentesis should produce less volume. If this does not occur, a thoracostomy (chest) tube is necessary. Greater than three thoracocentesis warrants a chest tube. It will usually take three to five days for pulmonary lesions to heal. Open chest wounds should be immediately covered and surgical treatment will be necessary. A tension pneumothorax warrants an immediate thoracocentesis with placement of a chest tube using continuous suction. Supplemental oxygen therapy may be beneficial if pulmonary contusions or hemorrhage is present. Pain management is essential with these animals.
<b>Questions?</b>	Our 24/7 Emergency and Critical Care service is open year round and staffed by highly trained doctors and technicians. MVS attracts the top veterinarians from Canada and the United States for its positions and the ER doctors have access to specialists 24 hours a day, 7 days a week. Contact them at (248) 371-3713 or (248) 354-6660 with questions about your cases.

### **LOCATIONS**

3412 East Walton Boulevard  
Auburn Hills, MI 48326  
Ph. (248) 371-3713

29080 Inkster Road  
Southfield, MI 48076  
Ph. (248) 354-6660

