SUMMARY & CONCLUSION

Injuries of the chest are a major cause of morbidity and mortality in blunt trauma patients. Radiologic imaging plays an important role in the workup of the patient with thoracic trauma. The chest radiograph is the initial radiographic study of choice in patients with thoracic blunt trauma. It is an important adjunct in the diagnosis of many conditions, including chest wall fractures, pneumothorax, hemothorax, and can suspect other injuries to the heart and great vessels (e.g., enlarged cardiac silhouette, widened mediastinum). On the other hand, computed tomography (CT) is now used frequently in the evaluation of chest trauma. The primary role of chest CT has been to assess for aortic injuries, but CT has been shown to be useful for the evaluation of pulmonary, airway, skeletal, and diaphragmatic injuries as well. CT has overall greater sensitivity than radiography in the detection of pulmonary lacerations and pneumothoraces. Also it may be indicated in cases of suspected tracheobronchial injury. CT is of limited use in the assessment of rib fractures because such injuries are of limited clinical significance and can usually be identified at radiography; however, CT provides optimal visualization of thoracic spine fractures and superior assessment of suspected sternal fractures or sternoclavicular dislocation. Targeted spiral CT with sagittal and coronal reformatted images has increased sensitivity and specificity over that provided by conventional axial CT in the detection of diaphragmatic injury. The use of spiral CT scanning and CT aortography are more common in the diagnosis of patients with possible blunt aortic injuries. Although in many cases diagnosis can be made with confidence on the basis of CT findings, further investigation is often needed to confirm the diagnosis. Most authors advocate that positive findings or findings suggestive of an aortic injury (e.g. , a mediastinal hematoma) be augmented by aortography to more precisely define the location and extent of the injury, so, aortography remains the

criterion standard in the diagnosis of blunt aortic injuries. For patients with possible esophageal injuries in whom plain chest radiograph and esophagoscopic results are negative, contrast esophagogram are indicated, if its results are also negative, esophageal injury is reliably excluded. Magnetic resonance imaging (MRI) has a limited role in the initial evaluation of the trauma patient, but may be of use for the evaluation of the spine and diaphragm in patients who are hemodynamically stable. Early bedside ultrasonography has been used in the acute sitting to confirm or exclude hemothorax and pneumothorax, The sensitivity, specificity, and overall accuracy of ultrasound in these settings has excellent results.

In Conclusion: Chest radiograph serves as the principle-screening test for immediate assessment of the thorax after blunt chest trauma. while computed tomography scanning, particularly with spiral capability, is highly sensitive than the supine chest x-ray at detecting intra thoracic injuries, it is considered the imaging modality of choice in the assessment of patients with clinical or radiographic findings suggestive of aortic injury, chest wall injuries, or diaphragmatic tear following blunt chest trauma. On the other hand ultrasonography is very sensitive at detecting haemothoraces with a probe of (3.5-5Mhz), where a collection can be seen lying above the diaphragm, also it is recently described with a probe of higher frequency (7.5-10Mhz, linear) in detection of a pneumothorax, while this technique is limited in detection of rib fractures.