INTRODUCTION

Blunt chest trauma accounts for 100,000 hospital admissions a year in the United States and chest injuries are the third most frequent type of injury following high-speed motor vehicle accidents (**Kuhlman et al. , 1998).**

Approximately 25% of non-military trauma-related deaths are due to thoracic trauma. The majority of deaths occur after the patient reaches the hospital. **(Richard W. et al, 2001).**

Blunt thoracic trauma can result in significant morbidity in injured patients. Both chest wall and the intrathoracic visceral injuries can lead to life-threatening complications if not anticipated and treated**.(Wanek & Mayberry, 2004)**

Computed tomography of the chest has many features that make it attractive for evaluation of chest trauma. It is relatively quick, involves a minimum of special positioning, has excellent resolution of thoracic structures, and frequently detects injuries not apparent on plain chest X-ray **(Blostein et al. , 1997).**

Thoracic computed tomography proved to be more sensitive than chest X-Ray in detecting pulmonary contusion, hemothorax, pneumothorax, and vertebral fractures. **(Guerrero L. et al, 2000).**

Chest wall injuries: Rib fractures occur in 56%of patients with major blunt chest trauma, but many of these fractures are not shown on the initial radiography. Fractures of the sternum are rare and they account for 5-10%of chest wall injuries and occur in elderly patients **(Chang and Hiorns, 1996).**

Pleural space injuries: Pneumothorax ranks secondary only to rib fractures as the most common injury in blunt chest trauma. Hemothorax is the most common cause of shock in blunt chest trauma. **(Tocino and Miller, 1984).**

Pulmonary injuries: Pulmonary contusion is present in 30% to70% of patients with blunt chest trauma. Shearing forces cause pulmonary laceration with the immediate formation of blood or air filled cavities **(Kerns and Gay 1990).**

Mediastinal injuries: Rupture of the thoracic aorta or one of the brachiocephalic arteries is a major cause of morbidity and mortality, 10-15% of all traffic fatalities are due to injuries of the thoracic aorta or its branches. Tracheal injuries are rare, represents only 3%of all severe thoracic injuries. The esophagus may very rarely be damaged in closed injuries **(Keen 1984).**

Diaphragmatic rupture is uncommon occurring in from0.8% to1.0% of patients admitted with blunt force injury **(Kearney et al. 1989).**

Chest radiograph serves as the principle-screening test for immediate assessment of the thorax after blunt chest trauma **(Kang and Muller 1996).**

Computed tomography (CT) is the imaging modality of choice in the assessment of patients with clinical or radiographic findings suggestive of aortic injury, bone fracture, or diaphragmatic tear following blunt chest trauma **(Van Hise et al, 1998).**

Increasingly, Early bedside ultrasonography has been used in the acute sitting to confirm or exclude hemothorax**(Shanmuganathan & Mirvis, 1999)**