Introduction

Neck trauma is an important area of trauma care that has undergone evolution in the recent past **(*Demetriades . et a; 1995*).**

Few emergencies pose as great a challenge as neck trauma. Because a multitude of organ systems (eg, airway, vascular, neurological, gastrointestinal) are compressed into a compact conduit, a single penetrating wound is capable of considerable harm. Furthermore, seemingly innocuous wounds may not manifest clear signs or symptoms, and potentially lethal injuries could be easily overlooked or discounted(***Demetriades . et al; 2007*) .**

Neck injuries are classified according to their anatomic location. into three zones. Zone I extends from the clavicles to the cricoid cartilage, zone II from the cricoid to the angle of the mandible, and zone III from the angle of the mandible to the base of the skull. Zone II injuries are much more straightforward operatively, whereas zone I and III injuries may present a formidable challenge **(*Sofianos .et al; 1996*).**

Evidence of significant injury to vital structures of the neck may be indicated by the following clinical manifestations: Active external hemorrhage from the wound site ,Hematoma , Bruit/thrill ,Stridor ,Dysphagia ,Hoarseness, Subcutaneous emphysema ,Oronasopharyngeal bleeding , Neurologic deficit. Hypotension or pulse deficit may be related to the neck injury or may indicate trauma elsewhere **(*McConnell , Trunkey, 1994*).**

Cervical anteroposterior and lateral radiography is used to evaluate for vertebral bony injury, retained foreign bodies, location, size, and number. Four-vessel cerebral angiography is indicated with clinical evidence of significant vascular injury in zone I and zone III, as well as selectively managed zone II injuries. Two-dimensional Doppler studies are a noninvasive alternative to angiography to evaluate vascular injury in evaluable zones (principally zone II). Esophagography is essential to

evaluate for an esophageal perforation. Selecting the oral contrast medium for esophageal injury detection is controversial. Computed tomography (CT) scan is a study that can evaluate many structures at a time and that is enhanced with the use of intravenous nonionic contrast media. Direct laryngoscopy for evaluation of oropharyngeal and tracheal injuries .Flexible bronchoscopy - For delineation of tracheal and bronchial injuries **(*Gonzalez . et al; 2003*).**

Consider an emergent MRI and/or magnetic resonance angiography for evaluation of the patient exhibiting neurological impairment with minimal or absent abnormalities on plain radiographs of the cervical spine **(*Stallmeyer .et al;2006*) .**

The evaluation of a patient with neck trauma always should start with advanced trauma life support (ATLS), a paradigm that begins with a directed primary survey emphasizing airway, breathing, and circulation (ABC) **(*McConnell , Trunkey. 1994*).**

Physical examination of the patient should focus on the 3 major organ systems commonly involved in penetrating neck injury: airway, vascular system, and upper digestive tract:

- Evaluation of the airway is focused on the respiratory status of the patient, such as the respiratory rate and signs of airway distress, including dyspnea and stridor. Vocal quality should be noted, and the patient should be questioned about changes in the voice. The neck and upper chest should be palpated for subcutaneous emphysema, and the larynx and trachea should be palpated for tenderness and crepitus. Flexible laryngoscopy, CT imaging, and/or direct laryngoscopy and bronchoscopy may be necessary to fully evaluate suspected airway injuries **(*Walsh . 1994*).**

- Injuries to the great vessels of the neck may be obvious on physical examination and may present as an exsanguinating wound or expanding hematoma. A significant vascular injury may be subtle, with findings

such as an absent distal pulse, bruit, or isolated neurologic deficit. Suspected vascular injuries can be further evaluated with angiography and exploration **(*Walsh . 1994*).**

- Injuries to the esophagus and pharynx are difficult to diagnose and may be missed during the management of other immediately life-threatening injuries. Bleeding from the mouth, drooling, and subcutaneous emphysema are all suggestive of upper digestive tract injury. Careful examination of the oropharynx and hypopharynx should be performed at the bedside, if possible. A contrast-enhanced study of the esophagus and esophagoscopy should be performed if injury is suspected clinically **(*Walsh . 1994*).**

All patients with suspected or confirmed injuries to the neck that extend deep to the platysma should be treated according to a protocol of either mandatory neck exploration or selective management, depending on the philosophy of the surgeon. If a surgeon who is experienced in the management of penetrating neck injuries is not available or if the facility is not equipped to treat a patient with this type of injury, the patient should be stabilized and transferred to an appropriate medical center **(*Klyachkin . et al; 1997*).**

Indications for immediate surgical penetrating neck injuries include hemodynamic instability, exsanguinating hemorrhage, or expanding hematoma. Patients in stable condition should undergo a thorough evaluation of the vascular structures of the neck and the aerodigestive tract prior to surgical intervention. Surgical management varies in difficulty depending on the area of neck injury. Surgical exposure of the injury is particularly difficult in zones I and III. Vascular control may be problematic in zone I (proximal control) and zone III (distal control). This consequently leads to the higher mortality rates in patients with vascular injuries in these neck zones **(*Klyachkin . et al; 1997*).**

The type of incision depends on the neck zone and the structures at risk for injury. An additional consideration is proper exposure to gain

adequate proximal and distal control of involved blood vessels. The standard neck incision, parallel the medial border of the sternocleidomastoid muscle, can be used for most injuries in zone II and can be extended cephalic for zone III injuries, specifically, injuries to the distal carotid or vertebral arteries. Extension of the standard neck incision, transversely to the opposite side, can be performed for bilateral injuries **(*Klyachkin . et al; 1997*).**

Aim of the Work

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This review aims at outlining the different types of neck trauma, clinical presentation, investigations and management of trauma of the neck and its complications.