Immediate care of the injured patient

Mohammed El Sayed El Sayed Al Gamal

SUMMARYl-a Trauma is the third common cause of death after cardiovasculardisease, and cancer in western counteries. The mortality, andmorbidity of trauma affects mostly the young, and causes loss of manyyears of working life. Trauma seems to be on increase because of themodern way of living and transport. Death from trauma is medicallypreventable in one third of all deaths from trauma.l-b Trauma care is an integral part of emergency medical services. Propermanagement of trauma victim needs the organisation of accidentservice.l-c At the scene of the accident prehospital resuscitation must start. Thisbasically consists of getting access to the victim, his extraction, triage,transport, and instituting life saving measures.l-d Grading the severity of trauma is now standardised. The best availablescoring systmes are; injury severity score; CRAMS score, andGlasgow coma scale.2-a Trauma initiates a widespread system response almost involving allorgans of the body. The aim of this response is to keep homeostasis,and to provide nutrients, and perfusion to vital organs especially theheart and the brain.2-b The cardiovascular response after trauma compensates for blood lossof up to l litre while maintaining the blood pressure, losses of less-116than 1-1.5litres of blood need replacement by crystalloids, and lossesmore than 1.5 litres need replacement by crystalloids and blood.2-c Trauma causes endocrine responses increasing the catecholamines.cortisol, aldosterone, vasopressin, growth hormone, angiotensin, andglucagon, while insulin is relatively unaffected. Thyroxin,parathormone, calcitonin, and sex hormones are not altered.2-d The endocrine environment after trauma causes profound metabolicchanges, affecting carbohydrate (mainly hyperglycaemia), proteins(protein breakdown in the muscles and much less degree visceralorgans, while plasma protein synthesis in acute phase reactant proteinssynthesis is increased), and fat (lipolysis is increased).2-e The oxygen consumption after trauma is increased by 50% because ofthe hypermetabolic state.2-f when cardiovascular response fails to maintain proper tissue perfusion,shock supervenes and this if untreated can lead to fatal complicationslike single organ failure (lung, kidney, liver, clotting, immune system,G.LT., or the heart), or multiple organ failure when more than oneorgan failure follow sequentially.3-a The initial management of the polytrauma patient is very vitalespecially the first hour after trauma. The priorities of resuscitationare:1. Airway maintainance.2. Breathing.3. Circulation.-1173-b Airway clearance of blood, vomitus, foreign body, etc, and preventingtongue from obstructing airway is essential. The airway is to be keptpatent by an oropharyangeal, or nasopharyngeal airway, orendotracheal tube. If E.T. tube IS

impossible cricothyroidotomy, ortracheostomy is life- saving.3-c Breathing is established by early recognition of lethal chest injurieslike; open chest injuries, flail chest, massive haemothorax, tensionpneumothorax, and cardiac tamponade. Supplemental O2 is needed forall trauma victims. Mechanical ventilation should be started onceindicated.3-d CPR must be started for cases of cardiac arrest.3-e Correction of circulatory disturbances in the shocked patient impliesarrest of external bleeding, restoration of blood volume, and otherresuscitation measures for shock management and cardiac arrest,besides the recognition and rapid management of internalhaemorrhage.3-f Monitoring especially of the circulation, respiration, and cerebralfunction is an integral part of the management of the severely injured.3-h Once the immediate dangers to life are managed, one shouldthoroughly examine and investigate for all possible injuries. Oneshould be highly suspicious of subtle injuries that may be missed in apolytrauma patient. Fully blown picture of these injuries may not beapparent at the start. Remember the guiding principle is the minimumadequate but the maximum safe.