Hospital care

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The principles of managing an acute burn injury follow the advanced trauma life support (ATLS) principles as per any major trauma: /uni25CF A, airway control; /uni25CF B, breathing and ventilation; /uni25CF C, circulation; /uni25CF D, disability – neurological status; /uni25CF E, exposure with environmental control; /uni25CF F , fluid resuscitation. The possibility of injury additional to the burn must be sought both clinically and from the history , and treated appro - priately . The major determinants of severity of any bur n injury are the percentage of total body surface area (TBSA) that is burned, the presence of an inhalation injury , the depth of the bur n and the age/comorbidities of the patient. Not all burned patients will need to be admitted to a burns unit, but the main criteria are given in Table 46.1 . Summary box 46.8 Major determinants of the outcome of a burn /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF - /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF

Percentage surface area involved Depth of burns Presence of an inhalational injury Age and comorbidities of the patient TABLE 46.1 The criteria for acute admission to a burns unit. Suspected airway or inhalational injury Any burn likely to require /f_l uid resuscitation Any burn likely to require surgery Patients with burns of any signi /f_i cance to the hands, face, feet or perineum Patients whose psychiatric or social background makes it inadvisable to send them home Any suspicion of non-accidental injury Any burn in a patient at the extremes of age Any burn with associated potentially serious sequelae, including high-tension electrical burns and concentrated hydro /f_l uoric acid burns

Summary box 46.9 Recognition of the potentially burned airway /uni25CF /uni25CF /uni25CF /uni25CF The burned airway creates problems for the patient by swelling and, if not managed proactively , can completely occlude the upper airway . The treatment is to secure the airway with an endotracheal tube until the swelling has subsided, which is usually after about 48 hours (Figure 46.1). The indications of laryngeal oedema, such as a change in voice, stridor, anxiety and respiratory di ffi culty , are very late symptoms. Intubation at this point is often di ffi cult or impossible owing to swelling, so acute cricothyroidotomy equipment must be at hand when intubating patients with a delayed diagnosis of airway burn. Because of this, early intubation of suspected airway burn is the treatment of choice in such patients. The time frame from burn to airway occlusion is usually between 4 and 24 hours, so there is time to make a sensible decision with senior sta ff and allow an experienced anaesthetist to intubate the patient. Although antidotes exist to some specific components of smoke (carbon monoxide and cyanide), the treatment of smoke inha lation usually involves endotracheal intubation and ventilatory support (sometimes for several weeks). Summary box 46.10 Initial management of the burned airway /uni25CF /uni25CF /uni25CF

A history of being trapped in the presence of smoke or hot gases Burns on the palate or nasal mucosa, or loss of all the hairs in the nose Deep burns around the mouth and neck Hoarseness/change in voice Early elective intubation is safest Delay can make intubation very dif /f_i cult owing to swelling Be ready to perform an emergency cricothyroidotomy if intubation is delayed

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