EMERGENCY ASSESSMENT AND MANAGEMENT

EMERGENCY ASSESSMENT AND MANAGEMENT

Maxillofacial injuries that require hospital attendance are common and are most frequently related to trips and falls, road tra ffi c accidents (RTAs), taking part in sports and inter personal violence. Initial assessment requires a focused history of the mechanism of injury and a general medical and social history , followed by clinical examination. An injury to the body including facial trauma must be managed with an immediate assessment of the airway , breathing and circulation (ABC) in line with the established Advanced Trauma Life Support (ATLS) guidelines. Any visible object obstructing the airway should be removed if possible, and, if indicated, direct pres sure should be applied to bleeding points. If the patient has midface bleeding where direct pressure cannot be applied, the conscious patient may sit forwards or be placed on their side in the standard recovery position to minimise the risk of blood obstructing the airway . Care should be exercised if there are concerns of concurrent spinal injury . In severe injury to the midface skeleton, the maxilla can become detached from the skull base and displaced down wards and backwards (Figure 31.1). T he patient may pres ent with acute airway compromise if the midface impaction is also combined with a bilateral mandibular fracture, which can displace the tongue backwards. Such injuries are often asso ciated with significant oedema of the soft palate and tongue (Figure 31.2). In these situations, the team must be prepared to undertake an endotracheal intubation, a needle cricothyroid- otomy or an emergency surgical airway procedure if intubation proves di ffi cult. There are certain techniques that can be used immediately to relieve airway compromise, while preparations are made for definitive airway management. In the obtunded or unconscious patient, the maxilla can be disimpacted and pulled forwards using fingers. The tongue can be pulled and held forwards, with a large suture or a towel clip, to help open up the airway . High-volume suction must be readily available - - - - - to clear the blood as well as tooth fragments and debris from the oral cavity and upper aerodigestive tract. Torrential life-threatening haemorrhage may be seen in facial trauma that involves large soft-tissue lacerations, penet- rating neck injuries or ballistic injuries. The source of such bleeding is likely to be from injury to the maxillary arter y or pterygoid venous plexus in the grossly damaged midface, or branches of the external carotid artery or tributaries of the internal jugular vein in penetrating injuries of the neck. The management of severe bleeding may require application of

To describe the principles of management of facial soft- • tissue injuries To understand and describe the principles of management • of fractures of various facial bones, and appreciate the initial management of dental injuries Figure 31.1 A severe blow to the midface may detach the facial skele

ton from the base of the skull and push it downwards and backwards.

direct digital pressure or placement of anterior and posterior nasal packs. Specific inflatable balloon nasal packs or Foley urinary catheters may be utilised to exert pressure on the bleeding points. An endotracheal intubation or a surgical air way may be required if there is concern regarding extensive soft-tissue swelling secondary to injury or surgical intervention (Figure 31.3). It is important to assess the maxillofacial patient for severe head injury that can result in significant cerebral damage. Patients with facial injury and particularly those with injury due to interpersonal violence are frequently into xicated because of alcohol or drug abuse, which may mask the symptoms of head injury . Therefore, clinicians should have a low threshold for requesting a brain computed tomography (CT) scan to exclude significant intracranial injury . In such cases, it is prudent to include the facial bones in the CT request if indicated. Injuries Summary box 31.1 Emergency assessment and management /uni25CF /uni25CF /uni25CF Frederic Eugene Basil Foley , 1891–1966, urologist, Ancker Hospital, St Paul, MN, USA. which can lead to loss of sight if not dealt with urgently . Retrobulbar haemorrhage, which can cause acute compression of the optic nerve if not treated immediately , may lead to loss of vision (see Orbital fractures).

Figure 31.2 Loss of pharyngeal space secondary to oedema of the soft palate and the posteriorly displaced tongue may restrict the airway. Immediate management must include assessment of ABC with cervical spine protection, following which a more detailed assessment should ensue Life- and sight-threatening facial injuries should be treated immediately The clinical team should be prepared for endotracheal intubation or, if required, a surgical airway

EMERGENCY ASSESSMENT AND MANAGEMENT

Maxillofacial injuries that require hospital attendance are common and are most frequently related to trips and falls, road tra ffi c accidents (RTAs), taking part in sports and inter personal violence. Initial assessment requires a focused history of the mechanism of injury and a general medical and social history , followed by clinical examination. An injury to the body including facial trauma must be managed with an immediate assessment of the airway , breathing and circulation (ABC) in line with the established Advanced Trauma Life Support (ATLS) guidelines. Any visible object obstructing the airway should be removed if possible, and, if indicated, direct pres sure should be applied to bleeding points. If the patient has midface bleeding where direct pressure cannot be applied, the conscious patient may sit forwards or be placed on their side in the standard recovery position to minimise the risk of blood obstructing the airway . Care should be exercised if there are concerns of concurrent spinal injury . In severe injury to the midface skeleton, the maxilla can become detached from the skull base and displaced down wards and backwards (Figure 31.1). T he patient may pres ent with acute airway compromise if the midface impaction is also combined with a bilateral mandibular fracture, which can displace the tongue backwards. Such injuries are often asso ciated with significant oedema of the soft palate and tongue (Figure 31.2). In these situations, the team must be prepared to undertake an endotracheal intubation, a needle cricothyroid- otomy or an emergency surgical airway procedure if intubation proves di ffi cult. There are certain techniques that can be used immediately to relieve airway compromise, while preparations are made for definitive airway management. In the obtunded or unconscious patient, the maxilla can be disimpacted and pulled forwards using fingers. The tongue can be pulled and held forwards, with a large suture or a towel clip, to help open up the airway . High-volume suction must be readily available - - - - - to clear the blood as well as tooth fragments and debris from the oral cavity and upper aerodigestive tract. Torrential life-threatening haemorrhage may be seen in facial trauma that involves large soft-tissue lacerations, penet- rating neck injuries or ballistic injuries. The source of such bleeding is likely to be from injury to the maxillary arter y or pterygoid venous plexus in the grossly damaged midface, or branches of the external carotid artery or tributaries of the internal jugular vein in penetrating injuries of the neck. The management of severe bleeding may require application of

To describe the principles of management of facial soft- • tissue injuries To understand and

describe the principles of management • of fractures of various facial bones, and appreciate the initial management of dental injuries Figure 31.1 A severe blow to the midface may detach the facial skele

ton from the base of the skull and push it downwards and backwards.

direct digital pressure or placement of anterior and posterior nasal packs. Specific inflatable balloon nasal packs or Foley urinary catheters may be utilised to exert pressure on the bleeding points. An endotracheal intubation or a surgical air way may be required if there is concern regarding extensive soft-tissue swelling secondary to injury or surgical intervention (Figure 31.3). It is important to assess the maxillofacial patient for severe head injury that can result in significant cerebral damage. Patients with facial injury and particularly those with injury due to interpersonal violence are frequently into xicated because of alcohol or drug abuse, which may mask the symptoms of head injury . Therefore, clinicians should have a low threshold for requesting a brain computed tomography (CT) scan to exclude significant intracranial injury . In such cases, it is prudent to include the facial bones in the CT request if indicated. Injuries Summary box 31.1 Emergency assessment and management /uni25CF /uni25CF /uni25CF Frederic Eugene Basil Foley , 1891–1966, urologist, Ancker Hospital, St Paul, MN, USA. which can lead to loss of sight if not dealt with urgently . Retrobulbar haemorrhage, which can cause acute compression of the optic nerve if not treated immediately , may lead to loss of vision (see Orbital fractures).

Figure 31.2 Loss of pharyngeal space secondary to oedema of the soft palate and the posteriorly displaced tongue may restrict the airway. Immediate management must include assessment of ABC with cervical spine protection, following which a more detailed assessment should ensue Life- and sight-threatening facial injuries should be treated immediately The clinical team should be prepared for endotracheal intubation or, if required, a surgical airway

EMERGENCY ASSESSMENT AND MANAGEMENT

Maxillofacial injuries that require hospital attendance are common and are most frequently related to trips and falls, road tra ffi c accidents (RTAs), taking part in sports and inter personal violence. Initial assessment requires a focused history of the mechanism of injury and a general medical and social history , followed by clinical examination. An injury to the body including facial trauma must be managed with an immediate assessment of the airway , breathing and circulation (ABC) in line with the established Advanced Trauma Life Support (ATLS) guidelines. Any visible object obstructing the airway should be removed if possible, and, if indicated, direct pres sure should be applied to bleeding points. If the patient has midface bleeding where direct pressure cannot be applied, the conscious patient may sit forwards or be placed on their side in the standard recovery position to minimise the risk of blood obstructing the airway . Care should be exercised if there are concerns of concurrent spinal injury . In severe injury to the midface skeleton, the maxilla can become detached from the skull base and displaced down wards and backwards (Figure 31.1). T he patient may pres ent with acute airway compromise if the midface impaction is also combined with a bilateral mandibular fracture, which can displace the tongue backwards. Such injuries are often asso ciated with significant oedema of the soft palate and tongue (Figure 31.2). In these situations, the team must be prepared to undertake an endotracheal intubation, a needle cricothyroid- otomy or an emergency surgical airway procedure if intubation proves di ffi cult. There are certain techniques that can be used immediately to relieve airway compromise, while preparations are made for definitive airway management. In the obtunded or unconscious patient, the maxilla can be disimpacted and pulled forwards using fingers. The tongue can be pulled and held forwards, with a large suture or a towel clip, to help open up the airway . High-volume suction must be readily available - - - - - to clear the blood as well as tooth fragments and debris from the oral cavity and upper aerodigestive tract. Torrential life-threatening haemorrhage may be seen in facial trauma that involves large soft-tissue lacerations, penet- rating neck injuries or ballistic injuries. The source of such bleeding is likely to be from injury to the maxillary arter y or pterygoid venous plexus in the grossly damaged midface, or branches of the external carotid artery or tributaries of the internal jugular vein in penetrating injuries of the neck. The management of severe bleeding may require application of

To describe the principles of management of facial soft- • tissue injuries To understand and describe the principles of management • of fractures of

various facial bones, and appreciate the initial management of dental injuries Figure 31.1 A severe blow to the midface may detach the facial skele

ton from the base of the skull and push it downwards and backwards.

direct digital pressure or placement of anterior and posterior nasal packs. Specific inflatable balloon nasal packs or Foley urinary catheters may be utilised to exert pressure on the bleeding points. An endotracheal intubation or a surgical air way may be required if there is concern regarding extensive soft-tissue swelling secondary to injury or surgical intervention (Figure 31.3). It is important to assess the maxillofacial patient for severe head injury that can result in significant cerebral damage. Patients with facial injury and particularly those with injury due to interpersonal violence are frequently into xicated because of alcohol or drug abuse, which may mask the symptoms of head injury . Therefore, clinicians should have a low threshold for requesting a brain computed tomography (CT) scan to exclude significant intracranial injury . In such cases, it is prudent to include the facial bones in the CT request if indicated. Injuries Summary box 31.1 Emergency assessment and management /uni25CF /uni25CF /uni25CF Frederic Eugene Basil Foley , 1891–1966, urologist, Ancker Hospital, St Paul, MN, USA. which can lead to loss of sight if not dealt with urgently . Retrobulbar haemorrhage, which can cause acute compression of the optic nerve if not treated immediately , may lead to loss of vision (see Orbital fractures).

Figure 31.2 Loss of pharyngeal space secondary to oedema of the soft palate and the posteriorly displaced tongue may restrict the airway. Immediate management must include assessment of ABC with cervical spine protection, following which a more detailed assessment should ensue Life- and sight-threatening facial injuries should be treated immediately The clinical team should be prepared for endotracheal intubation or, if required, a surgical airway

---

Revision #1
Created 2025-12-31 15:13:13 UTC by Omar Ayman
Updated 2025-12-31 15:13:13 UTC by Omar Ayman