FACIAL SWELLING
Dr Robin Macmillan

BACKGROUND
Facial swelling is common and follows a wide variety of insults and disease processes. Swelling may be localised or generalised. Swelling of the intro- oral contents frequently provokes severe anxiety can rarely lead to airway obstruction. Airway management of the oedematous pharynx and larynx is not for the novice.

DIFFERENTIAL DIAGNOSIS
The classical listing of the causes of a swelling covers most causes. Consider trauma, infection, tumour and other.

Trauma is usually obvious and associated with significant haemorrhage. Associated cerebral injury may complicate the matter. Lying patients supine with facial fractures may lead to airway obstruction and death. The management of such patients for CT imaging etc. needs careful consideration of this risk. Massive facial swelling from subcutaneous emphysema can follow traumatic or spontaneous pneumothorax especially in the elderly COPD patient.

Infection will produce impressive swelling in addition to other features such as pain and fever. Dental, maxillary frontal periorbital and soft tissue infections will all produce marked, though fundamentally localised oedema. Don’t forget mumps. Floor of mouth infections (Ludwig’s Angina) can produce enormous swelling. All the above may obstruct the airway, especially if the patient reports difficulty in swallowing or drooling of saliva.

Tumour: local salivary glands, lymphomas or secondary lymphatic involvement is common. Superior vena caval obstruction from mediastinal tumour should be considered if there is generalised oedema.

Other: A large collection of systemic diseases e.g. nephrotic syndrome, Sjogren’s syndrome, SLE, sarcoidosis, angioneurotic oedema, anaphylaxis, tissue damage from toxins (insect and snake bites).

PRIMARY SURVEY AND RESUSCITATION
The maintenance of the airway is the fundamental concern. Consider the risk of intervention or change in position. If there is evidence of obstruction, stridor, hypoxia, or ongoing deterioration, find an EXPERIENCED anaesthetist as soon as you can. Emergency airway equipment is available (to skilled personnel) in theatres and in the ED.

HISTORY AND CHARTS
Past medial history especially drugs, previous episodes and duration of swelling. The rate of onset, presence of pain or paralysis, age of patient and circumstances are all useful pointers.
EXAMINATION
Facial swelling, localised, generalised, associated pain fever trauma, surgical emphysema, dentition, salivary glands, other lymphatic swellings, allergens, mouth and tongue, pharynx and larynx, voice affected, any stridor with forced rapid inspiration/expiration. Drooling of saliva

INVESTIGATIONS
Driven by presumed aetiology: imaging of face/head and chest. Infectious screen, anaphylaxis screen, blood film and renal screen, C1 esterase inhibitor for angioneurotic oedema

INITIAL TREATMENT
Treat underlying disease if known (e.g. adrenaline for anaphylaxis, FFP for angioedema). Observe and maintain normal physiological parameters until diagnosis is apparent.

MONITORING
Vital signs, evidence of progressive swelling.

REFERRAL DISPOSAL
Medical ward or critical care area depending upon severity, physiological reserve and evidence of organ dysfunction.

NOTES
Steroids are often considered (Dexamethasone 4mg 6 hourly) where there is a presumed inflammatory non-infective cause.

The inhalation of nebulised adrenaline is another option, again if it is believed the oedema is inflammatory, not infective in origin.

Antibiotics should be based on the Trust antibiotic policy. The mouth has a large anaerobic flora.