Basic Surgical Procedures

Key Points
5.1 WOUND MANAGEMENT

- Many important procedures can be performed under local anaesthesia and do not require a surgical specialist.

- In most outpatient procedures, local or field block anaesthesia will be sufficient but general anaesthesia, including ketamine, may be necessary in children and should be available.

- Irrespective of the seriousness of a wound, give initial management priority to the airway, breathing and circulation.
5.1 WOUND MANAGEMENT

- Good lighting and basic instruments are important for adequate wound examination and management.

- Work efficiently to avoid prolonging the operation unnecessarily; the risk of infection increases with time.

- Universal precautions are necessary to avoid the transmission of the HIV, hepatitis, Ebola and other viruses.
5.1 WOUND MANAGEMENT

Secondary healing

• Clear the operative field of devitalized tissue and foreign material

• While not a substitute for appropriate haemostasis, placement of a drain is an option if a wound is oozing; the collection of fluid and blood leads to increased risk of infection and delayed healing

• Minimize dead space when closing a wound.
5.1 WOUND MANAGEMENT

Secondary healing
5.1 WOUND MANAGEMENT

Drains

- Suction drains are active and closed
- Differential pressure drains are closed and passive
- Latex drains, which function by capillary action, are passive and open.
5.1 WOUND MANAGEMENT

Split skin grafting technique
5.2 SPECIFIC LACERATIONS AND WOUNDS

• Lacerations may be associated with neurovascular or other serious injury; a complete examination is required to identify injuries that are not immediately obvious.

• Minor problems are important because mismanagement can lead to major detrimental consequences.
5.2 SPECIFIC LACERATIONS AND WOUNDS
5.2 SPECIFIC LACERATIONS AND WOUNDS

WOUNDS OF THE TONGUE

Figure 5.11

Figure 5.12
5.2 SPECIFIC LACERATIONS AND WOUNDS

Ear Lacerations

Figure 5.13

Figure 5.14

Figure 5.15
5.2 SPECIFIC LACERATIONS AND WOUNDS

**NOSE BLEED (EPISTAXIS)**

*Figure 5.16*

Common site of bleeding

*Figure 5.17*
5.2 SPECIFIC LACERATIONS AND WOUNDS

OCULAR TRAUMA

Figure 5.18
Figure 5.19
Figure 5.20
5.2 SPECIFIC LACERATIONS AND WOUNDS

TENDON LACERATIONS

Figure 5.21

Figure 5.22

Figure 5.23

Figure 5.24
5.4 FOREIGN BODIES

• The removal of a foreign body may be
  – urgent, as in the case of airway compromise or
  – unnecessary, as in the case of some deep metal fragments

• Foreign body removal may be difficult or time-consuming; the patient should therefore be anaesthetized

• X-ray or fluoroscopy is recommended for the removal of radiopaque objects

• Foreign bodies in the cranium, chest or abdomen or in close proximity to vital structures must be removed in an operating room with a team prepared to manage possible complications.
5.4 FOREIGN BODIES

Ear

Figure 5.25

Figure 5.26

Figure 5.27
5.5 CELLULITIS AND ABSCESS

- Failure of a superficial infection to respond to medical management may be
  - due to resistance to the antibiotic or
  - to the presence of an abscess cavity

- If an abscess cavity is identified, drain it with a surgical incision

- Adequate surgical drainage requires anaesthesia to ensure that all parts of the abscess cavity are exposed.
5.5 CELLULITIS AND ABSCESS

Technique

• If in doubt about the diagnosis of abscess, confirm the presence of pus with needle aspiration.
• Prepare the skin and give adequate anaesthesia.
• Perform the preliminary aspiration using an 18 gauge or larger needle to confirm the presence of pus.
5.5 CELLULITIS AND ABSCESS

**Technique**

- Introduce the tip of a pair of artery forceps into the abscess cavity and open the jaws.
- Explore the cavity with a finger to break down all the septa.
- Extend the incision if necessary for complete drainage.
5.5 CELLULITIS AND ABSCESS

Specific sites

Dental abscess

Figure 5.32

Figure 5.33

Figure 5.34
5.5 CELLULITIS AND ABSCESS

Specific sites

Throat and neck abscesses

Figure 5.35
Figure 5.36
Figure 5.37
5.5 CELLULITIS AND ABSCESS

Mastitis and breast abscess

Figure 5.28

Figure 5.39

Figure 5.40

Figure 5.41
5.5 CELLULITIS AND ABSCESS

Infections of the hand

Figure 5.42

Figure 5.43

Figure 5.44

Figure 5.45

Figure 5.46

Figure 5.47

Figure 5.48
5.5 CELLULITIS AND ABSCESS

PERIANAL, RECTAL AND Pilonidal Sepsis

Figure 5.49
Figure 5.50
Figure 5.54
Figure 5.55
5.5 CELLULITIS AND ABSCESS

PERIANAL, RECTAL AND PILONIDAL SEPSIS

Figure 5.51
Figure 5.52
Figure 5.53
5.6 EXCISION AND BIOPSIES

- Excise benign lesions for treatment and confirmation of the diagnosis

- Establish the diagnosis of malignant disease by biopsy before beginning definitive treatment

- Obtain material for histological examination with:
  - Incision biopsies when part of the tumour is removed
  - Excision biopsies when the whole tumour is removed with a margin of surrounding normal tissue
  - Needle biopsies when a core of tissue is removed
5.6 EXCISION AND BIOPSIES

• Obtain material for cytological examination with a fine needle aspiration; false negative results occur if the biopsy does not include the lesion or if the lesion is necrotic

• Necrosis occurs with the use of electro-cautery, therefore excise the tumour with a scalpel

• False negative results occur in needle biopsies and aspirates due to sampling error; repeat a biopsy if the results are inconsistent with the clinical context

• Do not refer patients far from home if they have incurable metastatic disease
5.6 EXCISION AND BIOPSIES

- Specimen must arrive to the laboratory in an acceptable condition.

- Communication with the laboratory is essential on how the specimen are to be prepared, and the preservatives, fixatives or solutions that are best for local situations.

- Put the biopsies in a wide mouthed container

- Fix all biopsies in 10% formalin with volume ten times of the tissue.

- Label all samples appropriately.
5.6 EXCISION AND BIOPSIES

Specific Procedures
5.6 EXCISION AND BIOPSIES

Lymph Node Biopsy
5.6 EXCISION AND BIOPSIES

Eye

Figure 5.59
5.6 EXCISION AND BIOPSIES

**Needle aspiration**

![Diagram of needle aspiration](image)

**Needle biopsy**

![Diagram of needle biopsy](image)

*Figure 5.60* needle aspiration

*Figure 5.61* needle biopsy
5.6 EXCISION AND BIOPSIES

Gynaecological Biopsies
5.6 EXCISION AND BIOPSIES

Anorectal Endoscopy
5.6 EXCISION AND BIOPSIES

Sigmoidoscopy
5.6 EXCISION AND BIOPSIES

Anal Dilation Technique