

Surgery & HIV

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Outline

- Operative risk
- Outcome of surgery
- HIV as co-morbidity
- Effect of treatment
- Patient work-up
- This patient
- Concluding remarks

HIV infection

- Incidence increasing
- More patients requiring surgery
- 20% - 25% → likely to require surgery
 - HIV-related pathology
 - Incidental pathology unrelated to HIV infection
- Risk of major surgery = other immunocompromised or malnourished patients

Operative risk

- Risk of surgery:
 - Unknown
 - Difficult to estimate
- Common perception → poor surgical risks:
 - High postoperative complication rate
 - Increased need for intensive care treatment
 - High mortality rate

HIV infection vs no infection

- Hospital stay
- ICU stay
- Mortality
- Morbidity

Similar

Bhagwanjee et al, 1997
Čačala et al, 2006
Madiba et al, 2009

HIV infection vs no infection

- Anorectal surgery – poor wound healing
- Late mortality – Higher in HIV infected
 - Not related to the surgical procedure
 - Related to stage of disease

Critically ill patients

- ICU mortality
- ICU stay
- Hospital



Similar

Disease stage

- Mortality: HIV infected = AIDS
- Hospital stay: HIV infected = AIDS
- CD 4 count:
 - >200 vs < 200 outcome similar
 - >200 vs < 50 → Complication rate higher for <50
- Anorectal disease
 - Wound healing rate: HIV infected < AIDS

HAART

- Reduced opportunistic infection
- Fewer hospital admissions
- Less mortality and morbidity
- Improved general health

Work-up

- Evaluate clinical stage
- Focus on overall organ system function
- Consider HIV & AIDS as co-morbidity & risk factors for surgery
- HIV infection is not an independent factor for outcome
- Tailor surgery accordingly
- Advanced HIV infection – Treatment may have to be modified
- Anticipate complications e.g. DVT

Principles of Biomedical Ethics

- **Autonomy**
 - Respect of person as an autonomous entity
- **Beneficence**
 - For the good of the patient
- **Non-maleficence**
 - Do no harm
- **Justice**
 - Fair access to health care

Doctor-patient relationship

- Doctor owes patient duty of care
- All competent adults should be regarded as autonomous beings
- → Free to choose between options available.

Patients' rights

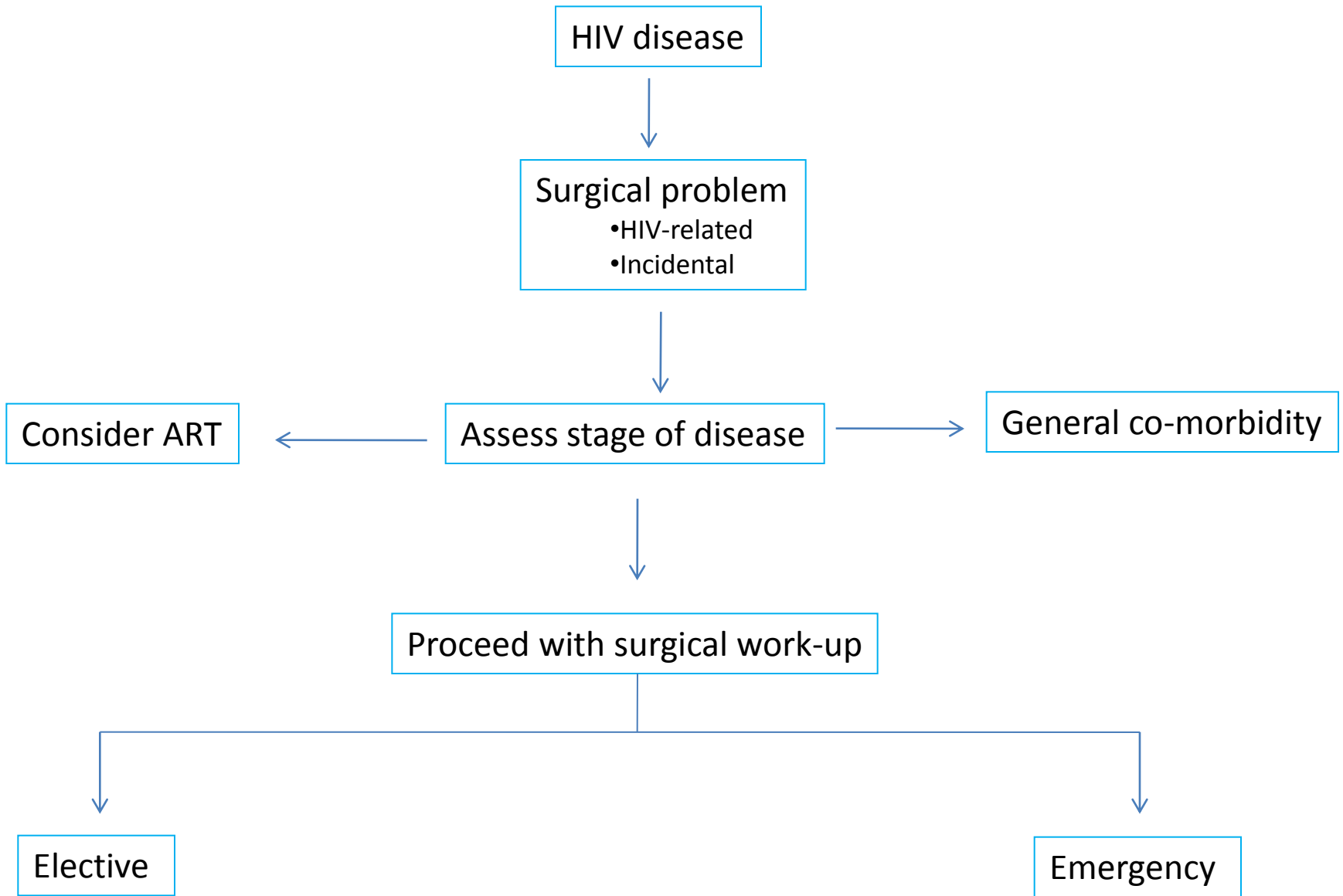
- Access to health care services
- Fair treatment
- Access to information
- Just administrative action
- Participation in decision-making

Caveat

- HIV infected patients
 - Low CD4 counts
 - Likely to be chronically ill
 - Nutritionally depleted
 - Often co-infection
 - May have AIDS-defining criteria
- Surgical decision should be based on these factors

Advanced HIV disease

- Palliative surgery
 - Relief of acute problems
 - Improvement in the quality of life
- Diagnostic surgery
 - Assists with further decision-making
 - Should not be withheld



Elective Surgery

HIV infected patient

Modify or delay Sx until immune restoration

Assess for:
•Stage of HIV Dx
•Co-morbidity

Need for ART

Benign

Malignant

HIV-related

Incidental

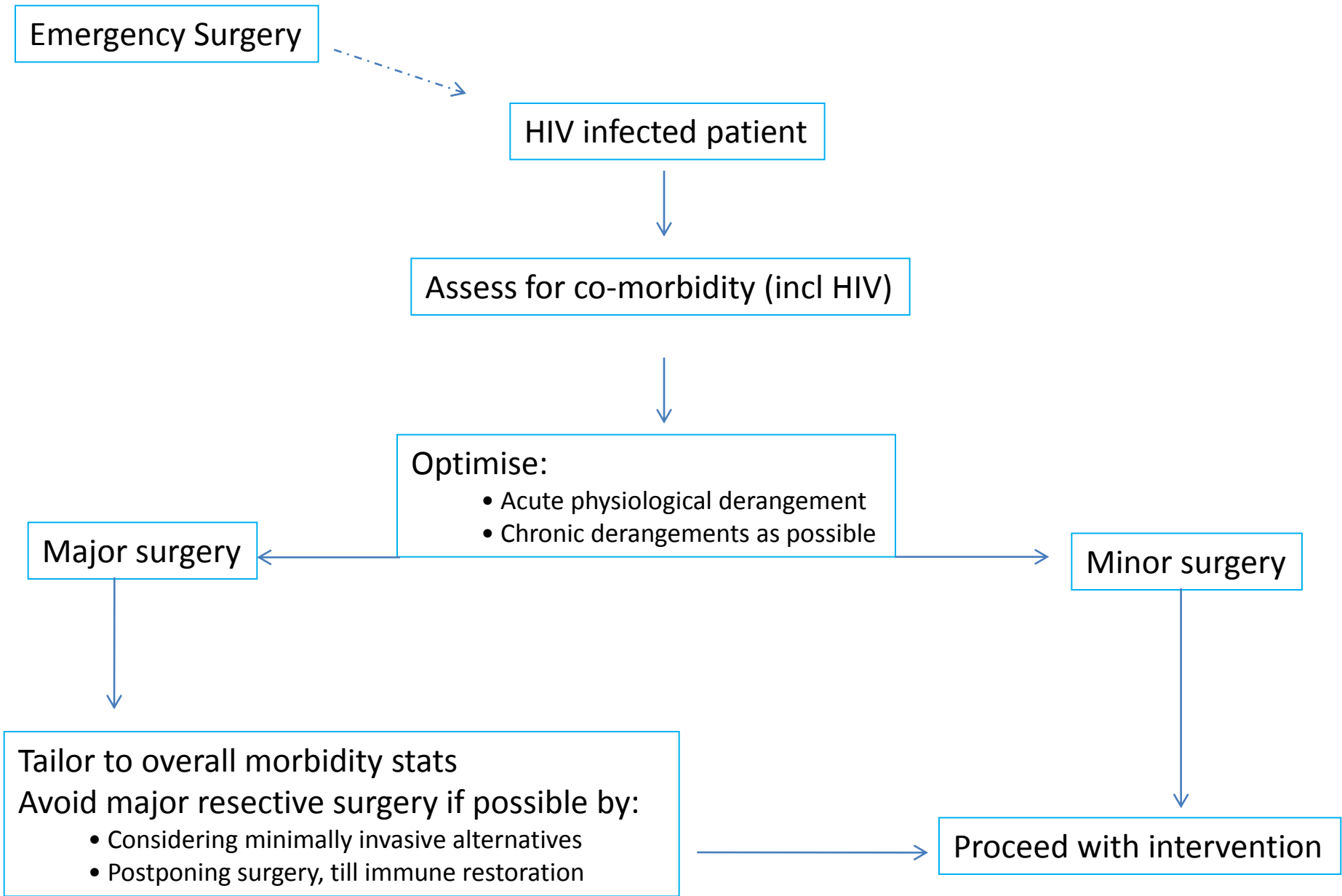
HIV-related

Incidental

Surgery

Stage of Surgical Dx

Multi-modal Rx



Emergency Surgery

HIV infected patient

Assess for co-morbidity (incl HIV)

Optimise:

- Acute physiological derangement
- Chronic derangements as possible

Major surgery

Minor surgery

Tailor to overall morbidity stats
Avoid major resective surgery if possible by:

- Considering minimally invasive alternatives
- Postponing surgery, till immune restoration

Proceed with intervention

When considering ART

- Screen for opportunistic infections first
 - TB
 - Pneumonia
- Treat OIs prior to initiating ARVs
- Adverse drug reactions (these are common)

Immune Reconstitution Inflammatory Syndrome (IRIS)

- Definition:
 - Unmasking of occult infections or paradoxical worsening of infections because of reconstitution of the immune system
- Weigh benefit of ARVs vs risk of IRIS
- In severely ill patients, benefit of ARVs outweigh risk IRIS-related complications

Dilemma

- What are the ethical implications of refusing to operate on a patient because the risk outweighs the benefits?
- Consider the risks:
- Will the patient survive the anaesthetic?
- What are the chances of death if you do not operate?
- What are the chances of death if you do operate?

HIV infection

- Factors influencing outcome
 - Degree of immunosuppression
 - Urgency of surgical intervention
- Specific predictors of poor outcome
 - Active opportunistic infection
 - Serum albumin level of <25 mmol/l
 - Presence of concurrent organ failure
- Mediators
 - Abnormalities of T-lymphocyte function

Madiba et al, 2009

This patient

Cause of mortality

- Emergency
- Necrotic bowel
- Fungal septicaemia
- Bronchopneumonia (ARDS)
- MODS

Anti-retroviral therapy?

- Do not commence at this stage
- Can be commenced following recovery

Discussion

- Surgical course and outcome similar
- Use of HIV status and CD4 count → no medical basis
- Institute surgical treatment without regard to HIV status alone
- Assessment:
 - Stage of HIV disease
 - Stage of Surgical Disease
 - Presence of other co-morbidities
- Referral for ART

Take home message

- Treat HIV-infected patients as general population
- Consider HIV and AIDS as co-morbidity
- HIV status not be used to defer treatment