Surgery & HIV

T E Madiba
Dept of Surgery
MBChB, MMed, LLM, PhD, FCS(SA), FASCRS
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

Madiba et al, 2009
Nickas & Wachter, 2000
Critically ill patients

- ICU mortality
- ICU stay
- Hospital

Similar

Bhagwanjee et al. BMJ 1997; 314:1077–1081
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

Madiba et al, 2009
Nickas & Wachter, 2000
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
  - Flair access to health care
The doctor-patient relationship:

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

Benatar S. (1987) 5 CME 27
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
HIV disease

Surgical problem
- HIV-related
- Incidental

Assess stage of disease

Consider ART

General co-morbidity

Proceed with surgical work-up

Elective

Emergency
Elective Surgery

HIV infected patient

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

Modify or delay Sx until immune restoration

Need for ART

Benign
- HIV-related
- Incidental

Surgery

Malignant
- HIV-related
- Incidental

Stage of Surgical Dx

Multi-modal Rx
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 outweighs risk IRIS-related complications
Dilemma

• What are the ethical implications of refusing to operate on a patient because the risk outweigh 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 sued to defer treatment