Contemporary Issues in Adolescent Care

MOOBS; BOOBS and JUBJUBES

Prof CA BENN
Why are we here?

Table 4: HIV prevalence estimates and the number of people living with HIV, 2001–2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Prevalence</th>
<th>Incidence</th>
<th>HIV population</th>
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<td>2011</td>
<td>19.4</td>
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*HIV prevalence*

Table 4 shows the prevalence estimates and the total number of people living with HIV from 2001 to 2011. The total number of persons living with HIV in South Africa increased from an estimated 4.21 million in 2001 to 5.38 million by 2011. For 2011 an estimated 10.6% of the total population is HIV positive. Shisana, et al. (2009) estimated the HIV prevalence for 2008 at 10.9%. Approximately one-fifth of South African women in their reproductive ages are HIV positive.

*Median time from HIV infection to death*

This release assumed the median time from HIV infection to death in line with the UNAIDS Reference Group recommendation of 10.5 years for men and 11.5 years for women.

2010: 10.3, 16.5, 10.5, 1.42, 5.38
2011: 19.4, 16.6, 10.6, 1.38, 5.38
Why is that important for us?

Median time from HIV infection to death
This release assumed the median time from HIV infection to death in line with the UNAIDS Reference Group recommendation of 10.5 years for men and 11.5 years for women.

Impact of late diagnosis and treatment on life expectancy in people with HIV-1: UK Collaborative HIV Cohort (UK CHIC) Study

Conclusions Life expectancy in people treated for HIV infection has increased by over 15 years during 1996-2008, but is still about 13 years less than that of the UK population. The higher life expectancy in women is magnified in those with HIV. Earlier diagnosis and subsequent timely treatment with antiretroviral therapy might increase life expectancy.
MOOBS

Gynaecomastia?

- The benign enlargement of male breast tissue

Pseudogynaecomastia

- Breast enlargement due to adipose tissue

Increase in childhood obesity
Are we truly diagnosing gynaecomastia in our young boys
Do we over diagnose in both population subsets
When is gynaecomastia physiological?

- 65-90% of neonates have breast tissue
- By age 14 up to 60% of boys have gynaecomastia.
D and D’s

• Body builders (androgen)....
• body dysmorphia in our young teenage boys
• Cosmetics, creams, and lotions
• lavender oil (Lavandula augustifolia), tea tree oil (Melaleuca alternifolia)
Illness

- Thyrotoxicosis increases production of androstenedione,
- Androgen catabolism is reduced in liver disease
- Renal failure
- Insulin resistance
- NIDDM

Tumours

- Testicular tumours have increased aromatase activity
- Lung and hepatic tumours
- Chemotherapy or radiation damages Leydig cells.
Treatment? When and how

- Physiological: (no treatment).
- Withdraw offending drugs or treat underlying disorders
- Tamoxifen (10-mg/ day) reduces pain and breast volume in 40-80% of boys
- Beware changing medication, decision is multi-disciplinary and should not be determined only by the gynacomastia
HIV and gynaecomastia

- Prevalence and mechanisms are uncertain.
- Pseudo-gynaecomastia can occur in patients with HIV-associated lipodystrophy.
- True gynaecomastia differentiated from breast hypertrophy (lipomastia) by breast ultrasonography.
- True gynaecomastia could occur with the use of all currently available classes of antiretroviral medications (efavirenz; nevirapine; protease inhibitors and nucleoside reverse transcriptase inhibitors).
• Gynecomastia should be distinguished from pseudogynecomastia as part of the lipodystrophy syndrome caused by Nucleoside Reverse Transcriptase Inhibitors (NRTIs) to avoid incorrect substitution of drugs.
Mechanism?

• IL-6 has been shown to increase aromatase activity in breast tissue
• Cytokine disturbances occurring with immune restoration may result in altered breast tissue oestrogen availability, which ultimately causes true gynaecomastia.
• Once immune restoration has occurred, the levels of these cytokines fall leading to restoration of the oestrogen
• Efavirenz-induced gynecomastia may occur in children as well as in adults
• In resource-poor settings, empirical change from efavirenz to nevirapine may be considered, providing no other known or alarming cause is identified
• Timely recognition of gynecomastia as a side-effect of efavirenz is important in order to intervene while the condition may still be reversible, to sustain adherence to ART and to maintain the sociopsychological health of the child.
Surgical treatment

• Goals of surgery include removing abnormal breast tissue, restoring the normal male breast contour, and reducing pain.

• Liposuction is effective if breast enlargement is mostly caused by adipose tissue and the overlying skin is fairly taut

• Subcutaneous mastectomy is required for removal of glandular tissue and redundant skin (visible inframammary skinfolds) and pain relief
### Love Classification

The identified categories include:

1. Mastalgia
2. Dominant Lumps
3. Nipple discharge
4. Swelling and tenderness
5. Nodularity
6. Breast Infection
Mastalgia

All girls/women have breast pain

• 10% of breast cancers present as a painful mass
• Isolated pain in the absence of a ultrasound abnormality is unlikely to be a cancer
• Adequate reassurance allows 85% of patients to accept and tolerate their pain

Non Cyclic : 4 subgroups

• Costochondritis, (NSAIDS)
• Burning pain of duct ectasia (Topical Bactroban)
• Lateral pulling pain (BRA)
• Constant heavy hormonal pain (Tamigel)
• Common Masses:
• ?but faster growth
When it is not cancer...

• Ulcerating mass.
• Nipple inversion.
• Non-healing or progressive...

• Difficult to image
• Difficult to biopsy
• Difficult to grow
• Difficult to treat
When it is not breast cancer...

• Incidence of Primary Breast Lymphoma seems to be higher
  - Rapidly growing normally in RUQ or axilla
  - Hodgkin and non-Hodgkin

• Kaposi’s sarcoma may present in both sexes and is AIDS defining
  - Multiple nodules or skin or in breast
  - ARVs +/- chemotherapy
Scenarios around HIV and the breast

- 17 year old girl presents with large rapidly growing L UOQ breast mass
- 15 year old girl presents with ulcerating areolar mass
- 15 year old presents with a small hard mass attached to skin
- 17 year old male with a central breast abscess
- 16 year breast feeding with an abscess not responding to Augmentin
Pre-tweens: 6-11
(JubJubes)

Girls
- Precocious development
- More galactorrhea
- Duct ectasia
- Excema
- Unilateral or bilateral breast gigantism.

Boys
- Described Gynacomastia
- Duct ectasia
Young Girls: Teens

- Breast Abscesses
- TB breast
- Lymphoma

Specific Breast Pain
1. Candida
2. Physiological pain
3. Costochodritis
4. Mondeors Sign
When it is not cancer...

• Chronic HIV and acute seroconversion can both cause sudden onset lymphadenopathy
  – Breast mass- in intramammary node
  – Axilla- thickened cortex and difficult to characterise
  – Lymphadenitis and obstruction can cause peau d’orange

• Counselling and testing must be sensitive but mandatory

• Core biopsy is sufficient where suspicion is low such as in HIV positive patients  
  Michelow (2010) Cancer Cytopath

• On ultrasound large dense nodes>2cm with absent fatty hilar should be considered high risk for HIV 
  Solomon (1999) Breast J.
YODA

Matter your lightsaber size does not, how you use it will.
Does it affect surgical management?

Is it safe to offer surgery to HIV positive patients?

What is an HIV+ patient?
ARV naïve? On HAART? CD4 count? Viral load?

- No association with immune status or viral load
- No association with complications
- Most important risk factors is ASA grade
- **Not a significant risk factor for infection**
- “HIV infection should not be considered a significant independent factor for major surgical procedures. Appropriate surgery should be offered as in normal surgical patients without fear of an unfavorable outcome”
  Madiba&Thomson (2009) WJS

- Local practice: Institute ARVs and aim for CD4 above 200 prior to surgery
What other surgical factors are affected?

• Reconstruction:
  – No contraindications for plastic surgery
  – Concerns around infection and vasculitis
  – Little described in breast but translated from facial lipodystrophy- fat fill and local flaps successful
  – Good experiences with breast conserving surgery
    • Radiation well-tolerated
  – Traditional avoidance of implants questioned
  – Free flaps avoided but local experience of pedicled flaps (incl TRAMs) good
    Housri (2010) Cancer
Psychosocial

Separate clinics (men and children)
Earlier surgical intervention?
Counseling
Conclusion

- Paucity of literature does not mean these conditions don’t exist
- Behooves us to develop specialized clinics
- Collate research
- Multidisciplinary care should extend to these little people