A case series of ART-associated gynaecomastia reported to the National HIV & TB Healthcare Workers (HCW) hotline

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MEDICINES
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Introduction

- Gynaecomastia: benign proliferation of glandular breast tissue in males
- Drugs cause 25% of gynaecomastia cases in adults[1]
- Other causes- endocrine disorders, HIV, renal disease, aging, puberty and hyperthyroidism
- ART-associated gynaecomastia:
  - Estimated prevalence of 2% [2,3]
  - Associated with efavirenz, stavudine and didanosine [2,3]
- Limited data in patients from Sub-Saharan Africa

[1] Carlos et al. Sao Paulo Med J. 2012; 130(3):189-197. [2] Mira et al. Antiviral Therapy .2004; 9:511-514.
[3]Biglia et al. Clin Infect Dis . 2004; 39:1514-1519

Study Objectives

To describe:

- characteristics of patients with suspected gynaecomastia
- clinical management
- patient outcomes
- time to improvement

Methods

- Suspected gynaecomastia cases reported to the National HIV & TB HCW hotline between 1 June 2013 and 31 July 2014 were included
- Initial telephonic follow-up at one month
- Additional follow-up after next visit if no resolution
- Improvement defined as reduction in breast pain and/or breast size

Results

- 51 suspected gynaecomastia cases reported to the HIV & TB HCW hotline
- 11% of 469 ADR queries received by the hotline between June 2013 and July 2014

Results

Table 1: Patient characteristics of suspected gynaecomastia cases

Patient characteristic	N (%) (n=51)
Age, mean ± sd	34 years ± 12
Age category	
Adolescents (10-17 years)	7 (14%)
Adult (>18 years)	44 (86%)
Baseline CD4 count (mm^3), mean ± sd	188 ± 94
Suppressed viral load (VL<50)	26 (51%)
Type of gynaecomastia	
Unilateral	16 (31%)
Bilateral	29 (57%)
Breast pain present	10 (20%)
Gynaecomastia onset, median months after ART initiation [IQR]	15 months [6-41]

Results

Table 2: ART regimens and additional drug suspects

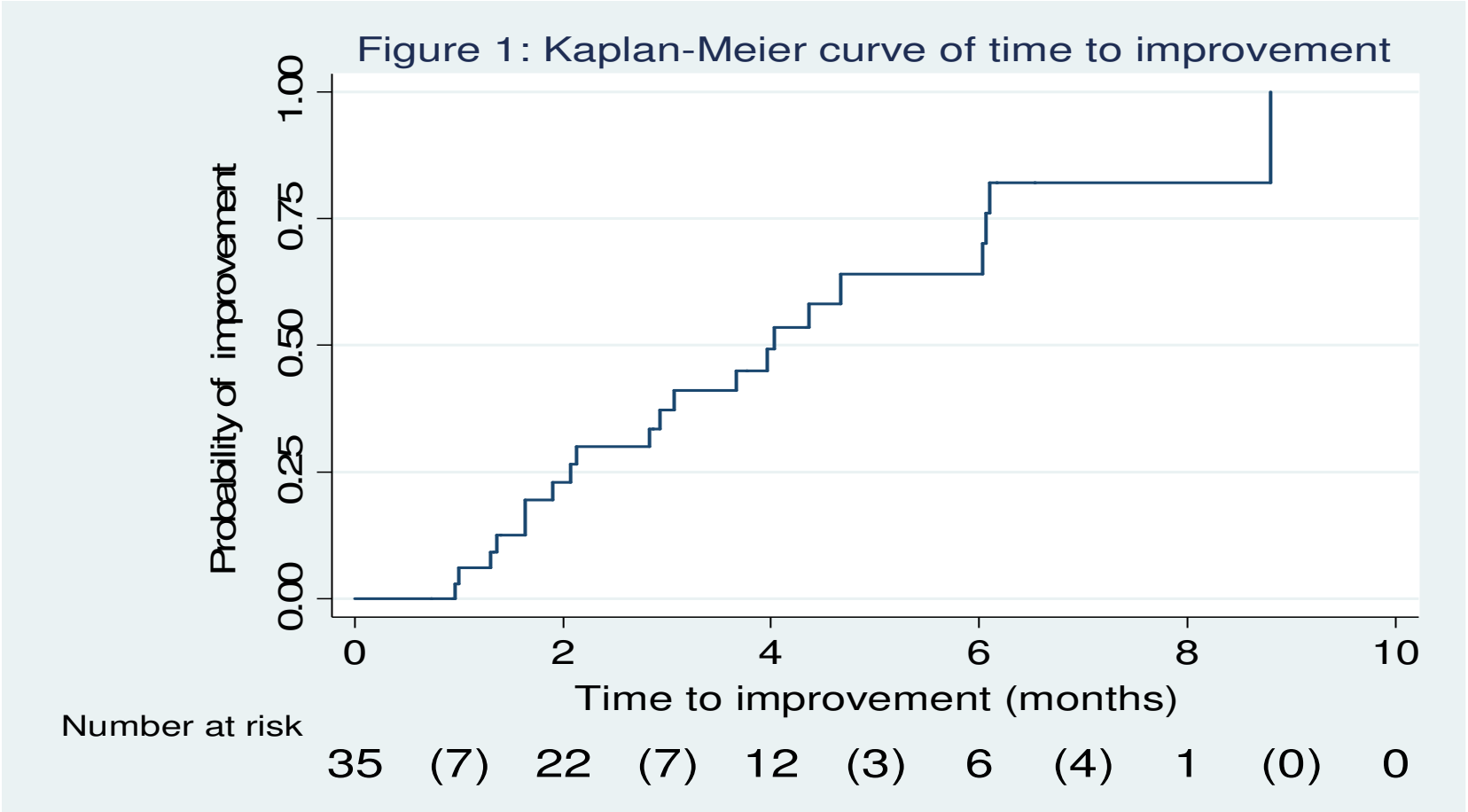
ART regimen	N (%) (n=51)
TDF + 3TC/FTC + EFV	40 (78%)
D4T + 3TC + EFV	5 (10%)
ABC + 3TC + EFV	4 (8%)
AZT + 3TC + EFV	1 (2%)
Additional drug suspects	
Yes	16 (31%)
Drug suspects*	INH (12), D4T (5), amlodipine (1)

*Some had > 1 suspect drug

Results

- 35/51 (68%) followed up, median 4 months , IQR[1-6]
- At follow-up, testosterone measured in 25/35 (71%):
  - 19 (76%) - normal
  - 2 (8%) - low
- Efavirenz switched in 29 (82%) cases of which:
  - 16 cases had normal testosterone levels
  - 27 switched to nevirapine and 2 cases to lopinavir/ritonavir
- Overall patient outcomes in 35 patients with follow-up:
  - Resolution- 7 (20%)
  - Improvement- 14 (40%)
  - Unchanged- 3 (8%)
  - Unknown- 11 (31%)

Results



Median time to improvement- 3 months, IQR [2-4] , range (1-8 months)

Discussion and Conclusion

- Efavirenz-associated gynaecomastia was frequently reported
- Most cases had prolonged efavirenz exposure and normal testosterone[4]
- 7 adolescents cases of suspected gynaecomastia- scarce data
- Overall patient outcomes were favourable
- Prospective studies are needed to determine:
  - Incidence and risk factors
  - Proportion associated with hypogonadism
    - usefulness of testosterone quantification
  - Optimal management- continue/stop efavirenz?
  - Incidence and optimal management of efavirenz-associated gynaecomastia in puberty

[4] Jover et al. The Breast Journal. 2004; 10(3): 244-246

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