Assessment of bone health of women living with HIV aged > 50 years in clinical practice: are we doing enough?

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INTRODUCTION

Osteoporosis is a disease which predominantly affects postmenopausal women worldwide and yet there are few data about bone health in women living with HIV (WLWH)

BHIVA guidelines recommend:

- 3 yearly fracture risk assessment using the FRAX tool on women >50 years or postmenopausal
- Women at increased risk of fracture have their bone mineral density (BMD) measured, their vitamin D levels optimised and their anti-retroviral medications (ARVs) reviewed.

AIM

To evaluate our adherence to BHIVA guidance for promotion of bone health in women >50 years attending a Hospital HIV outpatient clinic.

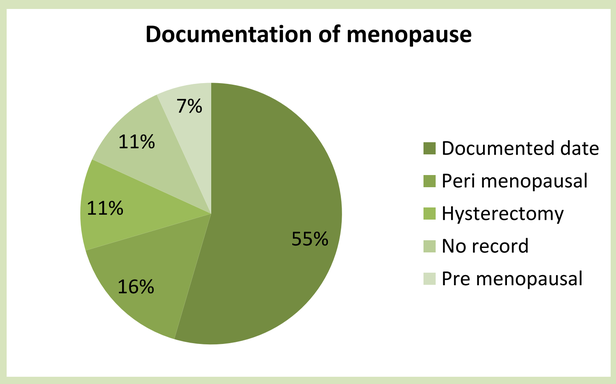
METHOD

Electronic patient records of WLWH aged > 50 years were reviewed.
Data were collected about:

- those risk factors required to compute a FRAX score
- risk stratification (10-year fracture risk estimate) by FRAX
- whether or not a DEXA has been performed and the results
- age at menarche
- age at menopause
- exposure to hormone replacement therapy (HRT)
- discussion about HRT
- current ARVs
- vitamin D assessment.

RESULTS

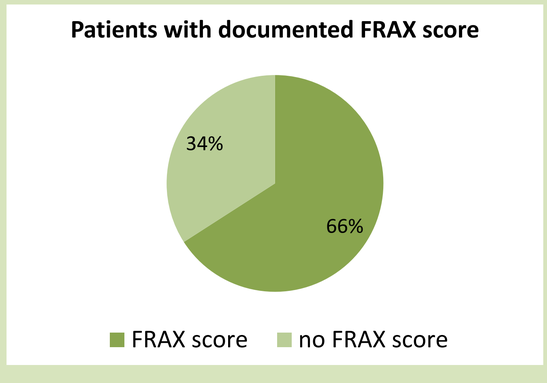
Among 250 women attending for HIV care, 44 women aged > 50 years were included in this analysis. Mean age was 56.2 years (range 51-76) with 28/44 (64%) of black African and 9/44 (20%) of white ethnicity.
24/44 (54.5%) had a documented date of commencement of their menopause with 2/24 (8.3%) reporting an early menopause (≤ 45 years). Of the remaining 20, 5/20 (25%) had a hysterectomy, 3/20 (15%) were pre-menopausal, 7/20 (35%) were peri-menopausal. No information about menopausal status was recorded for 5/20 (25%) women. Age at menarche was not recorded for any of the women.



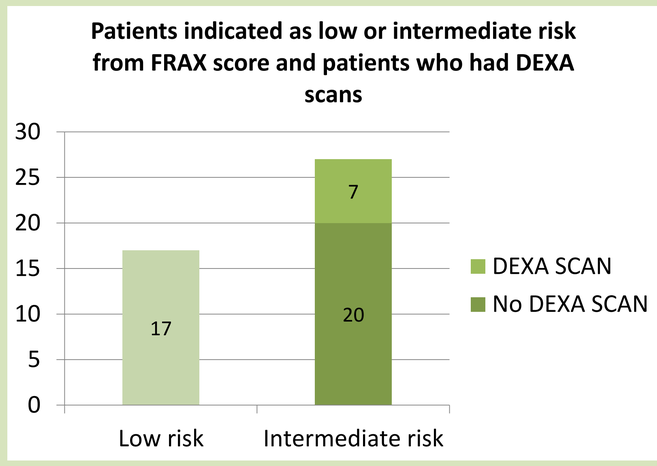
There was a documented discussion on HRT in 10/44 women (23%) with 3/44 (7%) receiving HRT. 2/44 (4.5%) women had a history of a low-trauma fracture and 1/44 (2.3%) reported parental hip fracture.

29/44 (66%) had a documented FRAX score. The score for the remaining patients was calculated by the authors.

	FRAX:10y major osteoporotic	FRAX:10y hip
lower quartile	4.6	0.4
mean	6.3	1.0
upper quartile	6.8	1.0
median	5.6	0.6



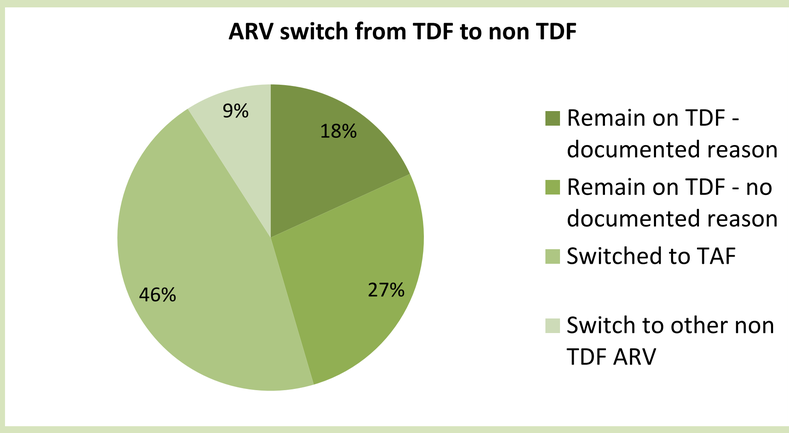
Based on the FRAX score, 27/44 (61%) fell into the "intermediate risk" category, with 21 of those (78%) included solely through inputting HIV as a secondary cause of osteoporosis in the FRAX tool. Of the 27 women at intermediate risk, 7 (27%) had been referred for a DEXA scan.



Among the 9 women who had a DEXA, all had evidence of osteopenia at ≥ 1 skeletal site but only one had a T-score< -2.5 SDs , i.e. osteoporosis (spinal).

18/27 (67%) of women at intermediate risk did not have Vitamin D level checked. 3/27 were already on Vitamin D supplements, 6/27 had Vitamin D levels checked of which 4 had deficiency (<30nmol/L). 3 of these were subsequently prescribed supplements.

20/44 (45%) remained on a Tenofovir disoproxil fumarate (TDF) based ARV regimen of which 8/20 (40%) had a documented reason for failure to switch; predominantly due to patient choice. In those who switched almost all 20/24 (83%) were switched to a regime containing Tenofovir alafenamide (TAF). The one patient diagnosed with osteoporosis was switched away from TDF.



DISCUSSION

Overall, we found that compliance with BHIVA guidance was moderate.
Menstrual enquiry to ascertain postmenopausal state was suboptimal and a record of risk factors for osteoporosis is often incomplete with a third of women having no documented FRAX score.
This may lead to underestimation of bone mineral density risk in this cohort.

We found a high prevalence of osteopenia amongst these women, most of whom were appropriately switched from TDF to TAF. However a high proportion of women classified as intermediate risk by FRAX score, did not have a DEXA arranged.
Anti-resorption therapy was appropriately prescribed for the one patient with confirmed osteoporosis.

With the success of ARVs in recent years and subsequent increasing age of the HIV cohort, greater emphasis ought to be placed on preventing and managing diseases of older age.
Our results suggest that an effective FRAX evaluation in post –menopausal WLWH could better identify those at risk of low BMD allowing for timely intervention.

Reference

1. **BHIVA guidelines for the routine investigation and monitoring of adult HIV-1-positive individuals:** *https://www.bhiva.org/file/DqZbRxfzlYtLg/Monitoring-Guidelines.pdf*