An Audit of Cardiovascular Risk and Weight Assessment in an Irish Tertiary Referral HIV Clinic

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Background

People living with HIV (PLWH) are at increased risk of cardiovascular disease.[1] Weight gain is an increasing issue amongst PLWH and has been shown to be associated with female sex, black race, tenofovir alafenamide (TAF) and integrase strand transfer inhibitors (INSTIs).[2] INSTI associated weight gain has been shown to be greatest among women and non-whites.[3]

The European AIDS Clinical Society (EACS) guidelines recommend an annual cardiovascular assessment with diabetic and lipid screen, blood pressure (BP) and BMI measurement, and smoking assessment.[4]

The aim of this audit was to investigate the adherence of Beaumont Hospital's HIV clinic with these guidelines.

Methods

We conducted a retrospective chart review of patients attending the clinic over 3 consecutive weeks in November 2021. A descriptive analysis was performed.

Results

Data were collected on 60 patients. The median age was 46 (IQR 39-51). 48% were female (N=29) and 27 patients were of black race (45%). The median CD4 count was 704 (IQR 479-885) and 90% (N=54) had an undetectable viral load. 1 patient (2%) had a history of cardiovascular disease. **Fig.1**

Characteristics		N=60
Age (Years): median (IQR)		46 (39-51)
Sex (Male): n (%)		31 (52%)
Race: n (%)	*Black African*	27 (45%)
	European	25 (42%)
	South American	5 (8%)
	Asian	2 (3%)
	Not recorded	1 (2%)
HIV specific factors	*Duration of HIV infection (years): median (IQR)*	12 (9-17)
	CD4 count at visit (cells/mm3): median (IQR)	704 (479-885)
	Virological Suppression (VL <40 cp/ml): n (%)	54 (90%)
Comorbidities: n (%)	*HTN*	11 (18%)
	Dyslipidaemia	18 (30%)
	Diabetes Mellitus	4 (7%)
	History of CVD	1 (2%)
ARV Regimen: n (%)	*INSTI use*	42 (70%)
	PI use	14 (23%)
	TAF use	41 (68%)
	ABC use	7 (12%)
	INSTI & TAF combination	33 (55%)

Fig.1

Over the previous one year 19 patients (32%) had their BP measured and 15 (25%) had their weight checked. No patients had BMI recorded. Lipids were checked in 45 patients (75%), HbA1C in 42 patients (70%) and smoking status was documented for 24 patients (40%). **Fig.2**

Of note 30 patients (50%) had never had their weight checked in clinic.

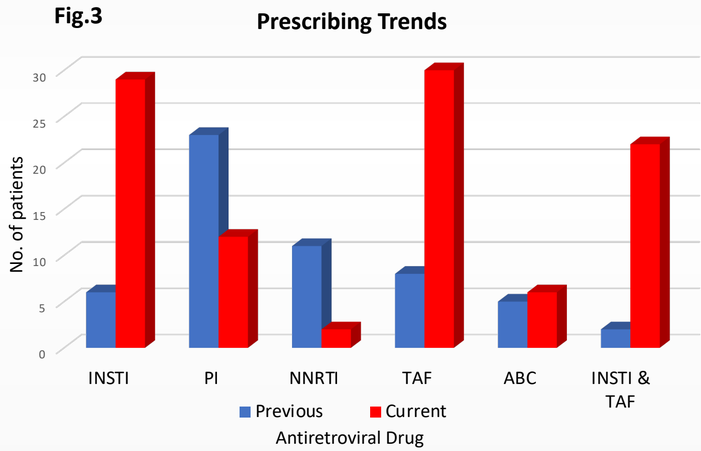
Clinic Intervention over past 1 year	N=60
BP Checked: n (%)	19 (32%)
Median Systolic BP (mmHg)	140
Median Diastolic BP (mmHg)	86
Weight checked: n (%)	15 (25%)
Median Weight (Kg): median (IQR)	95 (79.5-104.5)
BMI documented: n (%)	0 (0%)
Lipids checked: n (%)	45 (75%)
Tchol (mmol/L): median (IQR)	5.1 (4.2 -5.8)
LDL (mmol/L): median (IQR)	2.8 (2.25-3.6)
Triglycerides (mmol/L): median (IQR)	1.2 (0.9-1.7)
HbA1C checked: n (%)	42 (70%)
HbA1C (mmol/mol): median (IQR)	36 (33-39)
Smoking documented: n (%)	24 (40%)
Risk score calculated: n (%)	5 (8%)

Fig.2

42 (70%) patients were on an INSTI, 41 (68%) on TAF and 33 (55%) on both an INSTI and TAF.

41 patients had been on a previous antiretroviral regimen which we compared to their current regimen to assess prescribing trends. The rate of INSTI prescribing had increased from 15% (n=6) to 71% (n=29), TAF from 20% (n=8) to 73% (n=30) and INSTI/TAF combination from 5% (n=2) to 54% (n=22). **Fig.3**

Fig.3



Conclusion

There was a low prevalence of cardiovascular disease in our cohort. Annual diabetic and lipid screening was recorded for three quarters of our patients which can be improved. Compliance with BP monitoring, weight assessment and smoking status documentation was poor.

We demonstrated increasing rates of TAF and INSTI prescribing in a cohort with a high proportion of patients of black race. Efforts will focus on blood pressure and weight measurement in these high risk groups going forward. We intend to develop a clinic proforma and reaudit next year.

References

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