Screening approaches and clinical description of the anticholinergic burden in people with HIV

POSTER ID: 502

Maria Mazzitelli[1], Mattia Trunfio[2], Alessandra Coin[3], Lolita Sasset[1], Jacopo Farina[2], Monica Brundu[1], Vincenzo Scaglione[1], Giuseppe Sergi[3], Annamaria Cattelan[1]

[1]Infectious and Tropical Diseases Unit, Padua University Hospital, Padua, Italy. [2]Infectious and Tropical Diseases Unit, University of Turin, Turin, Italy. [3]Geriatric Unit, Padua University Hospital, Padua, Italy

BACKGROUND

- Clinical impact of anticholinergic (AC) burden in people with HIV (PWH) and how to routinely detect it in clinical practice have been poorly investigated. Therefore, we assessed the screening effectiveness of 3 AC scales in detecting AC symptoms and clinical correlates of AC burden in our cohort.

METHODS

- This cross-sectional analysis enrolled adult PWH who attended the Infectious Disease Unit of Padua Hospital (Italy) for their routine clinical checks (November 2021-March 2022).
- The AC burden scale (ABS), AC risk score (ARS), and AC drug score (ADS) were calculated. We recorded clinical data, comedications and interviewed our population, asking for the presence of 17 AC signs/symptoms over the last 3 month. High AC risk was defined by a validated cut-off: ABS score≥2, ARS, and ADS score≥3.
- Nonparametric tests and logistic regression were used; screening effectiveness of the three AC scales was assessed by the Area Under the Receiver Operating Characteristic curve (AUROC).

RESULTS 1/2

- We included 721 participants (median age 53 years, 72.0% males). Cohort description is reported in Table 1.
- Polypharmacy was present in 21.1% and 164 PWH (22.7%) were at least on 1 drug with AC properties (drug prevalence/type in Figure 1).
- 4.4% PWH were classified as high AC risk by at least 1 scale (1.1%, 3.5% and 3.1% according to ARS, ABS, and ADS, respectively). Agreement between ARS and the other scales was poor (Cohen's k 0.33 and 0.22) and moderate between ABS and ADS (k 0.60).
- Among PWH on AC drugs, 28.6% experienced at least 1 AC sign/symptom (prevalence/type in Figure 2).

About 23% PLWH were treated with AC drugs and about 29% PLWH on AC drugs experienced AC symptoms not routinely investigated and not properly assessed into clinical practice. Even if scales used for AC screening may be reliable in PLWH, a validated and specific cut-off for each of them is needed.

Table 1. Population main demographics and clinical characteristics

Variable		Overall population (n=721)
Age, years, median (IQR)		53 (44-59)
Male gender, n (%)		519 (72.0)
Caucasian, n (%)		613 (85.0)
Route of acquisition, n (%)	Sex between men	379 (52.6)
	Heterosexual	250 (34.7)
	Intravenous drug use	78 (10.8)
	Other	14 (1.9)
Years with HIV, years, median (IQR)		15 (7-24)
Antiretrovirals, n (%)	Dual	261 (36.2)
	INI-based	179 (24.8)
	NNRTI-based	204 (28.3)
	PI-based	72 (10.0)
	Others	5 (0.7)
Current CD4+ count, cells/mmc, median (IQR)		638 (474-811)
Nadir CD4+ count, cells/mmc, median (IQR)		299 (160-459)
Previous AIDS, n (%)		130 (18.0)
HIV-RNA <50 copies/ml, n (%)		693 (96.1)
Positive HBsAg, n (%)		75 (10.4)
Positive HCV-RNA, n (%)		34 (4.7)
Polypharmacy, n (%)		152 (21.1)
Comorbidities, n (%)	Cancer	105 (14.6)
	CKD	57 (7.9)
	IHD	51 (7.1)
	Lipodystrophy	64 (8.9)
	Hypertension	239 (33.1)
	Obesity	161 (22.3)
	Cirrhosis	24 (3.3)
	Diabetes	68 (9.4)
	COPD	44 (6.1)
	Anxiety	204 (28.3)
	Depression	116 (16.1)
	CNS disorders	107 (14.8)
N. comorbidities per subject, median (IQR)		2 (1-4)
Multimorbidity, n (%)		469 (65.0)

RESULTS 2/2

- After adjusting for univariate significant variables, factors independently associated with AC signs/symptoms were the type of antiretroviral regimen (aOR 15.2 and 32.0 for triple INSTI- and NN-based regimen *vs.* dual therapy, p=0.024 and 0.009; aOR 82.6 for triple protease inhibitors-based *vs.* dual therapy, p=0.082) and the overall number of AC drugs (aOR 9.7, p< 0.001).
- AUROC of ARS, ABS and ADS were 0.73 [0.63-0.82], 0.85 [0.78- 0.92], and 0.84 [0.75-0.92], respectively (p< 0.001 for all). Nevertheless, at the cut-off established for the general population the correct classification rate (78.0%, 82.9% and 84.8%) was affected by low sensitivity (34.0%, 46.8% and 46.8%).

Figure 1. Prevalence and type of AC drugs

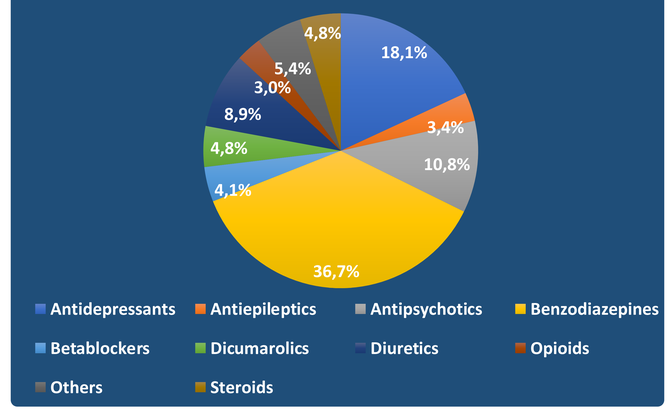
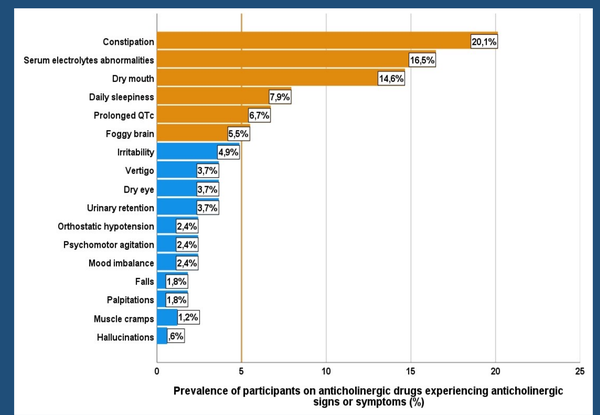


Figure 2. Type and prevalence of AC signs/symptoms and alterations in participants on drugs with AC properties



CONCLUSIONS

- AC drug use affected almost 1 out of 4 PWH in our cohort and the risk of developing AC manifestations was correlated with both the type of antiretroviral regimen and the number of drugs with AC properties.
- Current scales for AC screening in the general population showed an adequate reliability in PLWH but a context-specific work on the reassessment of the best cut-off is needed.

Maria Mazzitelli, M.D., Ph.D., email: m.mazzitelli88@gmail.com. Via Giustiniani 3, 35128, Padua (Italy)