POSTER P 148

Evaluation of lipid profile and intima media thickness in HIV experienced patients treated with PI-based regimens vs PI-sparing regimens.

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BACKGROUND

Antiretroviral therapy has increasingly improved management of HIV infection, ensuring long-term efficacy and tolerability. Each class of antiretrovirals has however different characteristics and different tolerability profiles. Literature data show that protease inhibitors (PIs) are associated with higher incidence of dyslipidemia[1].

AIM

The aim of our study is to evaluate whether patients treated with PIs have both greater dyslipidemia and increased IMT and atheromatous plaques compared to patients treated without PIs.

MATERIAL & METHODS

To evaluate the association between PIs and dyslipidemia associated with increased IMT, we enrolled 110 HIV-experienced patients in a retrospective observational study. All enrolled patients were screened with Doppler ultrasonography of the supra-aortic trunks in 2019. Patients were divided into 2 groups, 59 in the Cases group, treated with PIs and 51 in Controls without PIs (Fig. 1). In the 2 groups we evaluated lipids, cardiovascular risk factors (smoking, BMI, age, hypertension), increased IMT and eventual atheromatous plaques, assessed by Doppler ultrasonography (Table 1 e 2). We also performed a binary logistic regression analysis to assess the association of several patient factors (age, sex, BMI, smoke, lipids, PI regimen), to plaque appearance but without founding any significance (Table 3).

FIGURE 1

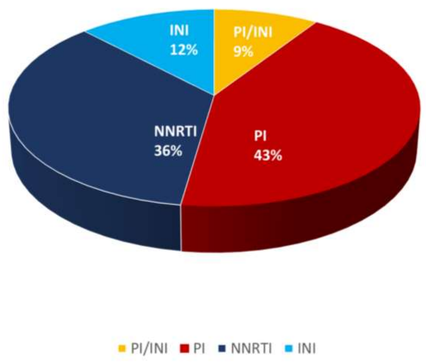


TABLE 1

BASELINE DATA	TOTAL	NO PI/r CONTROLS	PI/r CASES	p CASES vs CONTROLS
Numbers of patients	110	51	59	
Age median (range)	52 (35-80)	50 (31-80)	56 (40-85)	
Male/Female	85/25	41/10	44/15	
BMI > 24	58/110	32/51(%) 62,7	42/59 (%) 71,1	0,46
Risk Factors for HIV infection	MSM 43 (47,77%) PWID 19 (7,03%) HETERO 46(45.18%) OTHER 2 (1,48%)	MSM 23 (44,96%) PWID 5 (6,20%) HETERO 22 (47,28%) OTHER 1 (1,55%)	MSM 20 (50,35%) PWID 14 (7,80%) HETERO 24 (43,26%) OTHER 1 (1,41%)	
Antiretroviral Regimens	PI- based 59 (52%) NO PI - based 51 (48%)	INI 13(%) NNRTI 38(%)	PI 46 (%) PI+INI 12 (%) PI+NNRTI 1 (%)	
Lenght of infection	10.5 ± 7.7	8.1 ± 6.5	13,4 ± 7,6	0,0002
Statin use	16/110	4/51 (2,04%)	12/59 (7,08%)	0.11
Other lower lipids drugs	22/110 (24,2%)	5/51 (2,55%)	17/59 (10,03 %)	0.11
Anti hipertensive drugs	29/110 (31,9%)	13/51 (6,63)	16/59 (9,44%)	0.98
Diabetes	8/110 ((8,8%)	5/51 (2,55%)	3/59 (1,77%)	0,56
Smoker	45/110 (49,5%)	17/51 (8,67 %)	28/59 (16,52)	0,19
CDC CLASSIFICATION: C(late presenters)	C: 7 (11,48%)	C: 3 (5,88%)	C: 4 (6,77%)	0,86
CD4+		691,42 ± 1104,42	690 ± 1167,43	0.99
CD4+ NADIR , cell/µL mean ± SD	317.56± 192.23	335 ± 194	270 ± 171.8	0,06
Triglycerides (mg/dl) mean± SD	145.8 ± 82.12	138,82 ± 91.47	153.34 ± 74.71	0,35
Cholesterol mean (mg/dl) ± SD	183.23± 33.13	178.64 ± 31.42	187.84 ± 34.99	0,15
HDL mean (mg/dl) ± SD	46.91 ± 12.99	49.78 ± 14.35	44.51 ± 11.45	0,03
LDL mean (mg/dl) ± SD	115 ± 31.17	109.64 ± 27.8	120 ± 34	0,08
% of Elevated Triglycerides >150 mg/dl	42/109(38,53%)	16/51(31,37%)	26/58 (44,82%)	0,21
% of Elevated Cholesterol > 200 mg/dl	32/109(29,35%)	10/51 (19,6%)	22/58(37,93%)	0.059
% of Elevated HDL > 50 mg/dl	35/109(32,11%)	19/51 (37,25%)	16/58 (27,58%)	0.38
% of Elevated LDL > 160 mg/dl	8/109(7,33%)	3/51 (5,88%)	5/58 (8,62%)	0.85

RESULTS

Analysis of the data showed a clear association between the Cases group and dyslipidemia, although statistical significance was not achieved (Fig. 2). Similarly, we observed a clear association between Cases and the evidence of increased IMT and plaques(Fig. 3). In particular in the evaluation of left sections of carotid artery, Cases showed higher percentage of increased IMT than Controls (p 0,02)(Table 2).

TABLE 2

BASELINE DATA	TOTAL	NO PI/r CONTROLS	PI/r CASES	p CASES vs CONTROLS
Numbers of patients	110	51	59	
IMT > 1 at RIGHT CCA	12/110(10.9%)	4/51(7.84%)	8/58(13.55%)	0.49
IMT > 1 at RIGHT ICA	29/110(26.36%)	9/49(17.64%)	20/59(33.89%)	0.11
IMT > 1 at LEFT CCA	25/109(22.93%)	11/51(21.56%)	13/58(22.41%)	0.9
IMT > 1 at LEFT ICA	30/108 (27.7%)	9/50(18%)	21/58(36.2%)	0.05
RIGHT TOTAL PLAQUES	24/110(21.81%)	10/51(19.6%)	14/59(23.7%)	0.77
LEFT TOTAL PLAQUES	28/110 (25.45%)	9/51(17.64%)	18/59 (30.5%)	0.17
TOTAL PLAQUES	52/110(47,27%)	19/51(37,2%)	32/59(54,23%)	0,11

TABLE 3

		B	E.S.	Wald	df	Sig.	Exp(B)	95% CI per EXP(B) Inferiore	Superiore
Passo 1[a]	PI0si1no(1)	-,540	,452	1,428	1	,232	,583	,240	1,413
	Sex0men1women(1)	,698	,556	1,578	1	,209	2,010	,676	5,972
	Age0years501yearslt50 (1)	-,686	,550	1,557	1	,212	,503	,171	1,479
	BMI0lt241gt24(1)	,453	,457	,982	1	,322	1,573	,642	3,852
	Fumo0no1si(1)	,215	,434	,245	1	,620	1,240	,530	2,901
	colesterolototl0lt2001gt200(1)	-1,427	1,134	1,583	1	,208	,240	,026	2,217
	trigliceridi0lt1501gt150(1)	1,940	1,134	2,929	1	,087	6,959	,755	64,180
	Costante	-1,384	,644	4,618	1	,032	,251		

FIGURE 2

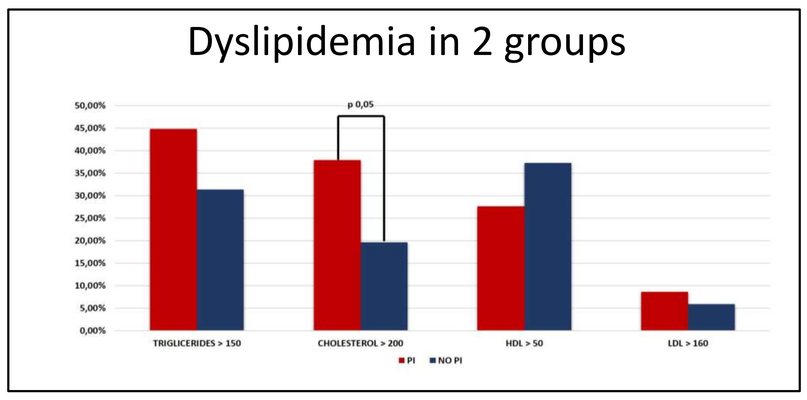
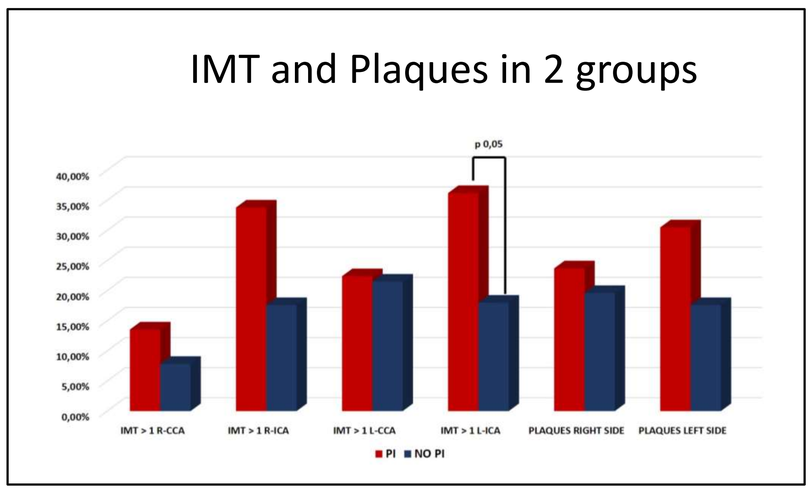


FIGURE 3



CONCLUSIONS

In conclusion, our real-life data, although partial, show that patients treated with PIs have a trend to develop both greater dyslipidemia, in accordance with the literature, and increased IMT and atheromatous plaques compared to patients treated without PIs[2]. Our data reach statistical significance only for evidence of increased IMT in the left sections of carotid artery in Cases group. These findings however could be useful to optimize the therapy of patients with cardiovascular risk factors..

REFERENCES

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DISCLOSURES

The authors declare to have no conflicts of interest.

CONTACS

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