48-WEEK BODY COMPOSITION CHANGES IN PLWH SWITCHING FROM 3DR TO DTG + 3TC: DOLAM STUDY

598

Elisa de Lazzari[1], Adrià Curran[2], Eugenia Negredo[3], Pere Domingo[4], Nadia Abdulghani[5], Jose M Gatell[6], Jose L Blanco[1] and Esteban Martínez[1] on behalf of the DOLAM study group

Hospital Clínic, Barcelona[1]; Hospital Vall d'Hebron, Barcelona[2]; Hospital Germans Trías I Pujol, Badalona[3]; Hospital de Sant Pau, Barcelona[4]; Hospital Arnau de Vilanova, Lleida[5]; ViiVHealthcare, Barcelona. Spain.

BACKGROUND

In DOLAM study, 48-week weight change from baseline increased significantly in DTG+3TC (2DR) arm (mean change 1·6 kg [95% CI 0·9 to 2·4], p<0·0001) but not in triple therapy (3DR) arm (0·1 kg [–0·6 to 0·8], p=0·78).

The difference between 2DR versus 3DR in mean weight change at 48 weeks was 1.5 kg (95% CI 0·5 to 2·5, p<0.005).

A pre-planned dual-X-absorptiometry (DXA) sub-study aimed to assess 48-week body composition changes.

METHODS

At baseline and at week 48 weight, height, and whole body, lumbar and hip DXA scans (Lunar iDXA) were performed to assess BMI, body fat, body lean mass and bone composition, respectively.

Changes in DXA parameters over time were assessed by random-effect regression models with time, treatment group and their interaction as covariates and adjusted by backbone and 3rd drug at baseline, age and sex.

In order to improve residuals distribution, each parameter was transformed into natural logarithm, thus the regression coefficients represent the relative change in the geometric mean (equivalently, median) of the untransformed variable.

RESULTS (continued)

BASELINE CHARACTERISTICS (tables below)

		3DR (n=92)	2DR (n=88)	Total (n=180)
Active smoker or ex-smoker ≤ 1y		30 (43%)	29 (43%)	59 (43%)
Women		12 (13%)	11 (13%)	23 (13%)
Age		46 (11%)	46 (11%)	46 (11%)
Risk for HIV	MSM	70 (76%)	67 (76%)	137 (76%)
	Non-MSM	22 (24%)	21 (24%)	43 (24%)
3rd drug	PI	6 (7%)	6 (7%)	12 (7%)
	NNRTI	51 (55%)	48 (55%)	99 (55%)
	INSTI	35 (38%)	34 (39%)	69 (38%)
NRTI backbone	ABC	34 (37%)	32 (36%)	66 (37%)
	TAF	18 (20%)	19 (22%)	37 (21%)
	TDF	39 (43%)	37 (42%)	76 (42%)

Data are shown as n (%) , or mean (SD).

		3DR (n=92)	2DR (n=88)	Total (n=180)
CD4 cells/mm^3		721 (273)	729 (264)	725 (268)
Glucose (mg/dL)		91 (13)	89 (18)	90 (15)
Total cholesterol (mg/dL)		183 (36)	185 (429	184 (39)
LDL cholesterol (mg/dL)		112 (31)	109 (29)	111 (30)
HDL cholesterol (mg/dL)		46 (11)	46 (15)	46 (13)
Triglycerides (mg/dL)		113 (52)	113 (61)	113 (56)
Diabetes		4 (4%)	2 (2%)	6 (3%)
Weight (kg)		72 (10)	73 (13)	72 (11)
BMI (kg/m^2)		25 (4)	25 (5)	25 (4)
BMI categories	Normal	61 (70%)	52 (63%)	113 (66%)
	Overweight	20 (23%)	21 (25%)	41 (24%)
	Obese	6 (7%)	10 (12%)	19 (9%)

Although weight at 48 weeks increased more in 2DR vs 3DR, **we did not detect significant changes in body fat, lean mass, or BMD between arms**

RESULTS

180 (68%) of 265 participants contributed to the sub-study.

Baseline characteristics did not differ between groups andfrom those of the main study.

At 48 weeks vs. baseline, weight (2DR vs. 3DR) ratio of ratios was 1.0151 (95%CI 1.0009-1.0294) P=0.037

RESULTS (continued)

COMPARISON OF THE CHANGE BETWEEN THE GROUPS. INTERACTION BETWEEN TIME AND TREATMENT GROUP.

DXA scan		Ratio of ratios	95% CI	P value
FAT (g)	Total body	1.04	0.94-1.14	0.451
	Trunk	1.17	0.93-1.47	0.182
	Limb	1.04	0.93-1.15	0.511
LEAN MASS (g)	Total body	0.98	0.92-1.03	0.418
	Trunk	0.99	0.97-1.02	0.620
	Limb	0.99	0.94-1.03	0.584
BMD (g/cm^2)	Lumbar spine	1.0019	0.9915-1.0125	0.716
	Total hip	0.9956	0.9820-1.0095	0.535

NO CORRELATION BETWEEN BODY FAT AND PLASMA LIPIDS

ln_dexa_total_fat	rho	Prob>F	[95% conf. interval]
ln_total cholesterol	.0486341	0.6434	-.1589023 .2520543
ln_LDL	-.0248365	0.8194	-.2367077 .1892895
ln_HDL	-.0503492	0.6317	-.2536638 .1572259
ln_Triglycerides	.0244134	0.8153	-.1813106 .2280903

ln_dexa_trunk_fat	rho	Prob>F	[95% conf. interval]
ln_total cholesterol	.1241417	0.2358	-.0839494 .3218578
ln_LDL	.1557973	0.1496	-.0592956 .3570654
ln_HDL	.0151407	0.8855	-.1914009 .2203983
ln_Triglycerides	.0362037	0.7290	-.1698733 .2392471

ln_dexa_limb_fat	rho	Prob>F	[95% conf. interval]
ln_total cholesterol	-.0272838	0.7952	-.2319255 .1796706
ln_LDL	-.102898	0.3429	-.3092404 .1126975
ln_HDL	-.0060018	0.9545	-.211685 .2001905
ln_Triglycerides	-.1054476	0.3118	-.3037057 .1015633

DXA scan		3DR (n=92)	2DR (n=88)
FAT (gr)	Total body	17667 (6667)	17435 (9540)
	Trunk	9877 (4334)	8967 (8037)
	Limb	7463 (3169)	7530 (4048)
LEAN MASS (gr)	Total body	45390 (11592)	47007 (8102)
	Trunk	24383 (4026)	24785 (3678)
	Limb	21606 (4909)	22425 (4348)
BMD (g/cm^2)	Lumbar spine	1.03 (0.17)	1.03 (0.16)
	Total hip	0.85 (0.15)	0.85 (0.15)

CONCLUSION

Although weight at 48 weeks increased more in 2DR vs 3DR, we did not detect significant changes in body fat, lean mass, or BMD between arms

Contact: estebanm@clinic.cat

Supported by Instituto de Salud Carlos III (PI16/01085), CIBERINFEC , and ViiV Healthcare