Switching to atazanavir due to therapeutic tenders: Short term outcomes

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Background

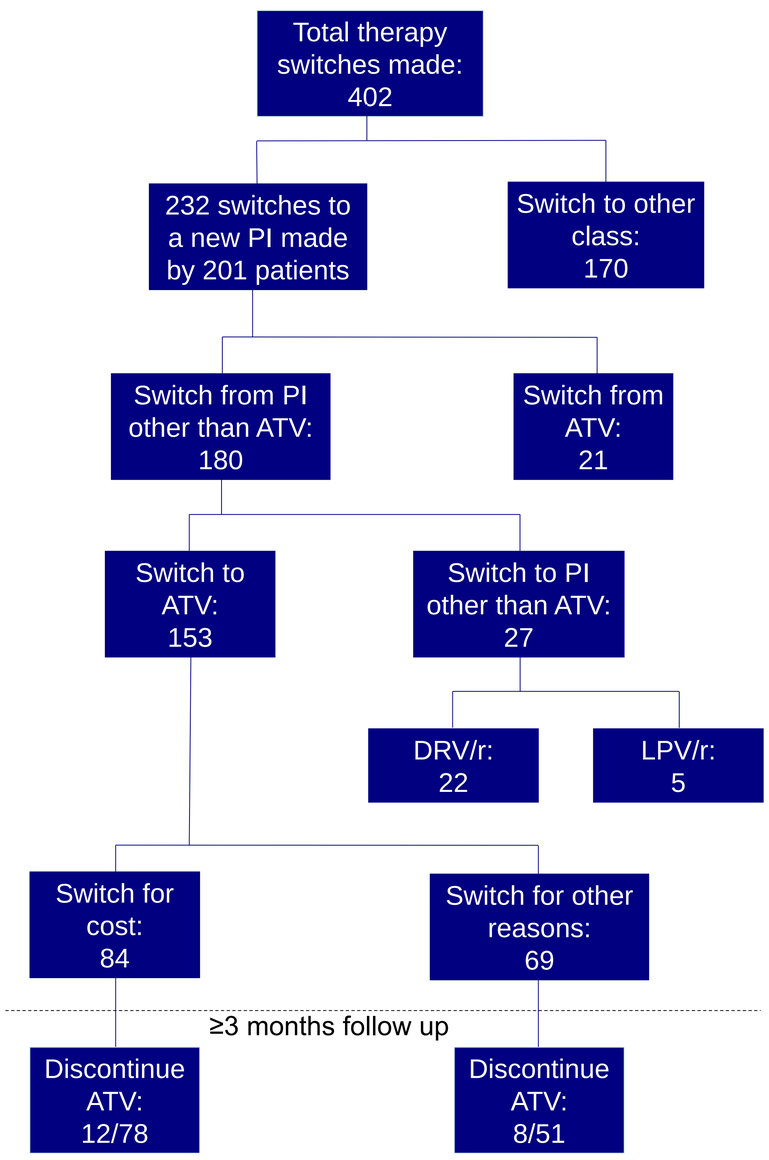
- From April 2011 the London HIV Specialist Commissioning Group (LSCG) introduced a preferred boosted-protease inhibitor (atazanavir 300mg, ATV) based on the outcome of a therapeutic tender
- Eligible patients were offered the switch of their current PI/r to ATV/r 300/100mg as part of an effort to save £7.8million across London over 2 years
- Although therapeutic switches are common in other clinical specialities, this is the first occasion it has been used in HIV
- Differential engagement of prescribing clinicians may influence the demographics of populations switched for cost
- We looked at switches within our cohort to compare short term outcomes for patients who switched to ATV/r for cost to those who switch to a PI for other reasons

Methods

- Data on all patients who switched to a protease inhibitor for any reason were prospectively collected using the LSCG therapeutic tender switch form
- Patient demographics and switch indication were recorded for each switch episode
- Short term outcomes of those who switched for cost was compared to those switching for other reasons (discontinuation within 3 months)

Results (1)

Fig 1: Breakdown of all switches over time period



- During the 10 month period 31 patients made 2 switches of protease inhibitor
- Switching due to cost was not associated with a higher incidence of short term discontinuation (12/78; 15% over 3 months) compared switching to ATV for other reasons (8/51; 16%), or switching to other ARVs (0/15; 0%) (P=0.26; chi-squared test) for those with ≥3 months follow up
- Patients were equally likely to discontinue ATV when co-prescribed with tenofovir, irrespective of the indication for switch (16% (14/90) TDF vs 11% (6/54) non-TDF regimens, p=0.46; chi-squared test)

Results (2)

Table 1: Patient demographics at switch of those who switched to ATV for cost, compared to switch to ATV for other reasons, switch to other PIs and the larger clinic population

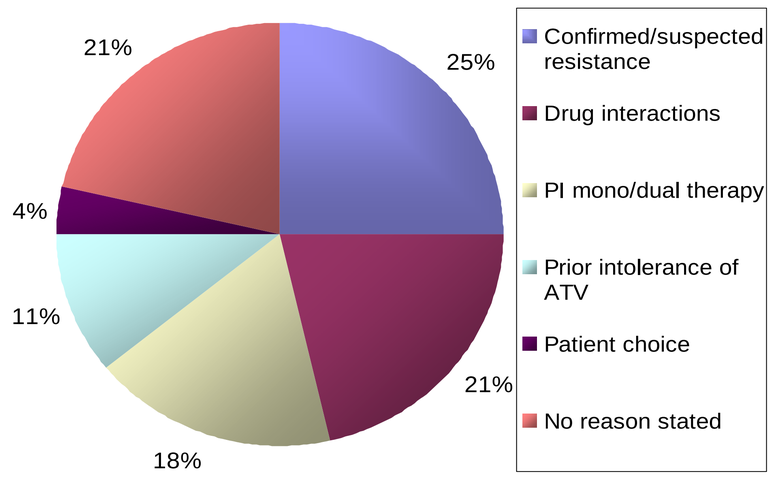
Demographic	Population on ART April 11 - Jan 12	Switch to ATV for cost	Switch to ATV for other reasons	Switch to a PI other than ATV	P-value (cost vs. other reasons)	P-value (clinic population vs. cost switch)[c]
N	2444[a]	84	69	27	-	-
CD4						
Median (range)	602 (2, 4103)	614 (113, 1322)	565 (30, 1453)	645 (82, 1139)	0.92	-
VL<50c/mL						
Yes	1725/1909 (90.4) [b]	78/84 (92.9)	50/65 (76.9)	18/25 (72.0)	0.02	-
Gender						
Male	1830 (74.9)	62 (73.8)	44 (63.8)	23 (85.2%)	0.10	0.75
Ethnicity						
Black African	627 (25.7)	33 (39.3)	22 (31.9)	4 (14.8)	0.04	0.10
Other	336 (13.8)	13 (15.5)	19 (27.5)	11 (40.7)		
White	1481 (60.6)	38 (45.2)	28 (40.6)	12 (44.4)		
Risk						
Heterosexual	939 (38.4)	53 (63.1)	33 (47.8)	7 (25.9)	0.003	0.01
MSM	1378 (56.4)	30 (35.7)	30 (43.5)	18 (66.7)		
Other	127 (5.3)	1 (1.2)	6 (8.7)	2 (7.4)		
Age						
Median (range)	45 (16, 84)	44 (24, 84)	44 (16, 73)	47 (38, 66)	0.11	0.18

[a]150 excluded with insufficient information to be included in analyses; [b] amongst those receiving their regimen for >6 months; [c]p-value from multivariate logistic regression, after adjustment for prescribing clinician

Table 2: Indication for switch amongst those changing their protease inhibitor

	Switch to ATV	Switch to non-ATV PI
N	153 (100.0%)	27 (100.0%)
Overall		
Switch for cost	84 (54.9%)	0 (0%)
Switch for other reasons	69 (45.1%)	27 (100%)
Break down		
Due to cost	84 (54.9%)	0 (0.0)
Toxicity	32 (20.9)	7 (25.9)
Intolerance	11 (7.2)	3 (11.1)
Resistance	5 (3.3)	5 (18.5)
Pill burden	5 (3.3)	5 (18.5)
Viral failure (no resistance)	5 (3.3)	2 (7.4)
PK issues	2 (1.3)	0 (0.0)
Other	5 (3.3)	2 (7.4)
Unknown	4 (2.6)	3 (11.1)

Fig 2: Reasons given for not prescribing atazanavir (n=27)



- 83/84 switches to ATV for cost were made in those already taking a PI. One patient was switched from raltegravir to ATV/r due to cost
- Patients switching to ATV for cost were significantly more likely to have VL<50c/ml at switch compared to those who switched for other reasons (table 1)
- Compared to those who switch to ATV for other reasons, and the clinic population, those switching to ATV for cost were more likely to be heterosexual and Black African (table 1). However, there are differences both in the patient demographics according to treating clinician, and the engagement of different clinicians in the tender process. Once this was accounted for, the effects were much attenuated (table 1, final column)

Discussion

- Switching to ATV for cost does not to lead to a difference in the rate of short term discontinuation compared to switching for other reasons
- When switching for reasons other than cost, the choice of PI is likely to be influenced by the LSCG tender process
- Although the demographics of those who switched for cost was different to the overall on-treatment clinic population, this was highly influenced by variation in individual prescribing clinician's engagement in the LSCG switch process
- For clinicians who engaged in the switch process, the demographics of their patient population were similar to those they switched for cost
- Outside of switching for cost, the most common indication for switch to a PI was toxicity and intolerance, which is in line with previous reported data

Limitations

- Relatively small numbers of patients with short duration of follow up
- Demographics of those who declined switch for cost reasons were not collected
- Data collection only collects primary reason for switch of therapy, however this may oversimplify the issue

Conclusions

- Switching to atazanavir for cost does not result in increased short term discontinuation compared to switching to atazanavir or other PIs for other reason
- The demographics of those who are switched for cost are representative of the patient cohort of the clinicians who engage in the switch process
- Longer term follow up is required to demonstrate virological non-inferiority compared to those who switch for other reasons and those with similar demographics who do not switch therapy