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## SCREENING FOR HLA-B\*5701 REDUCES THE FREQUENCY OF ABACAVIR HYPERSENSITIVITY REACTIONS

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**BACKGROUND:** Zidovudine therapy is increasingly recognised as a risk factor for the development of lipoatrophy in HIV infected patients. Tenofovir and abacavir are alternative nucleosides without this concern. However abacavir can cause a hypersensitivity reaction (HSR) in about 6% of exposed people. HLA-B\*5701 is strongly associated with abacavir hypersensitivity so screening individuals for this allele offers the opportunity to reduce considerably the incidence of this adverse event.

**METHODS:** A prospective study of B\*5701 testing in patients starting or switching HAART. Abacavir was avoided in those testing positive for B\*5701. Individuals completing 6 weeks of therapy were considered tolerant of abacavir. The HSR frequency was compared with those starting abacavir prior to B\*5701 testing, using Fisher's exact test. 95% confidence intervals are quoted for the proportion experiencing HSR.

**RESULTS:** A total of 561 patients were tested: 43 (7.7%) were positive. Gender/ethnicity were as follows: males=481 (86%), females=80 (14%); Black=76 (14%), White=449 (80%), other ethnicity=36 (6%). The B\*5701 carriage frequency in White patients was 39/449=8.7% and in Black patients it was 4/76=5%. Abacavir was started for the first time in 52 patients who were naive or re-starting therapy and 103 treatment experienced patients, modifying their current therapy (88 switching from a thymidine analogue). The HSR frequency in the abacavir-treated cohort prior to B\*5701 testing was 20/321=6.2% (3.9–9.6%). Testing led to a significant reduction in HSR with only one patient discontinuing abacavir because of a possible HSR, a frequency of 0.6% (0.03–4%,  $P=0.002$ ). A non-HIV physician outside of the UK discontinued therapy in this case.

**CONCLUSIONS:** HLA-B\*5701 testing in this cohort has led to a significant reduction in the frequency of HSR in individuals treated with abacavir. The carriage frequency was as expected in persons of White ethnicity but higher than expected in those of Black ethnicity. The small numbers of Black patients in our sample make it difficult to comment on the utility of B\*5701 testing in this group. We intend to investigate further the one individual with possible HSR by epicutaneous patch testing.

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