

12th Annual Conference of the British HIV Association



29 March–1 April 2006, Brighton, UK

NATURAL KILLER CELL NKG2A EXPRESSION IS UNAFFECTED BY SHORT-TERM INCREASES IN HIV-1 VIRAEMIA DURING TREATMENT INTERRUPTION

HIV Med 2006; 7(Suppl. 1):6 (abstract no. O22)

Christopher M Mela¹, Catherine T Burton¹, Nesrina Imami¹, Mark Nelson², Brian G Gazzard², Frances M Gotch¹ and Martin R Goodier¹

¹Imperial College, London, ²Chelsea and Westminster Hospital, London, UK

AIMS: NKG2A is an inhibitory C-type lectin receptor whose expression is dysregulated in natural killer (NK) cells and T cells during HIV-1 infection. This longitudinal study analysed whether changes in the number and phenotype of NK cells occurred after an interruption in HAART and whether increases in HIV1 viraemia during treatment interruption (TI) affected the expression of the inhibitory C-type lectin receptor NKG2A on NK cells and T cells.

METHODS: Expression of NKG2A on NK cells and T cells was investigated in two groups of HIV-1-positive patients, either with or without viraemia prior to TI. Cell phenotype was analysed by flow cytometry before TI, during early TI (0.5–2 months) and within 1 month of resuming HAART after patient-directed TI.

RESULTS: Patients with baseline undetectable viral loads had a significantly greater proportion of NK cells expressing NKG2A (mean 33.7±SD 11.2%) compared to those with viraemia (20.7±10.9%, $P<0.005$). In healthy controls 58.6±12.6% of NK cells expressed NKG2A. Despite similar viraemia during TI in both groups, no significant changes occurred in the absolute numbers or percentages of NK cells in either group. There was no change in the proportion of NK cells expressing NKG2A during or after the period of TI. In contrast, the proportion of T cells expressing NKG2A increased, on average from 2.7±1.4% to 3.8±2.3% ($P<0.005$), in both groups over the course of TI and no significant differences were observed between the two groups.

CONCLUSION: Patients with long-standing viral suppression have a greater percentage of NKG2A-expressing NK cells than those with chronic viraemia. Reduced proportions of NKG2A+ NK cells are not determined by short-term changes in viraemia; in contrast, NKG2A+ T cells are more sensitive to virus.

2006-03-29
O22

Copyright © 2006 - [British HIV Association \(BHIVA\)](#) Reproduction of this abstract (other than one copy for personal reference) must be cleared through the BHIVA Organising Secretariat 1 Mountview Court, 310 Friern Barnet Lane, London N20 0LD