The Use of Azathioprine in HIV-infected individuals

Introduction

The safety of azathioprine in HIV- infected individuals has not been established.

We aimed to:

1] describe the reasons for azathioprine use in an HIV-infected cohort
2] evaluate its effect on immune parameters
3] determine the risk of infectious or malignant complications

Methods

All HIV-infected individuals on azathioprine whilst receiving highly active antiretroviral therapy (HAART) between January 2008 and August 2012 were included. Immune parameters and haemoglobin were recorded before commencement of azathioprine therapy; after 1 month and every 3 months until treatment ceased. After treatment had ceased, parameters were recorded every 3 months for a maximum of 1 year, where available.

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Results

- All 7 individuals (mean age = 38.5years) were receiving HAART at commencement of azathioprine with a mean treatment duration of 16.59 months

Patient	Sex	Age	Reason for Azathioprine	Months on Azathioprine	HAART	Reason for stopping if not finished
1	F	53	Myositis	14	ABC+3TC+EFV	Patient RIP
2	M	36	HSV related IRIS	2	FTC+MVC+DRV+RTV	Poor tolerance (n&v)
3	F	52	Myasthenia gravis	65	DRV+RTV	N.A.
4	M	35	Ulcerative Colitis	3	Darunavir	Pancreatitis flare
5	M	27	Cryptococcal meningitis related IRIS	24	DRV+RTV+TFV+FTC	N.A.
6	F	34	TB related IRIS	12	Atripla	Anaemia & neutropenia
7	F	33	MAC related IRIS	0.13	MVC+EFV+TFV+FTC	Patient RIP

- WCC fell by 40.89% in all individuals from pre treatment to the end of treatment. Mean CD4 count decreased by 29.74%; mean CD4% rose by 25.19% in the same time period. Mean CD8 count decreased 31.76% whilst mean CD8% fell by 2.12%. Neutrophil counts decreased by 44.33% over the course of treatment but no values below 0.6x106/ml were recorded. Haemoglobin fell by 7.80% and no transfusions were neccesary.
- Two patients died [a year after azathioprine with pneumonia and disseminated M avium; died on azathioprine with diabetes and left ventricular dysfunction

Discussion

- Azathioprine can be considered safe in the context of HIV so long as individuals are commenced on HAART prior to treatment and that regular monitoring of immune parameters takes place.

- Limitations include: Retrospective, small numbers, varying doses and duration of treatment, inconsistent monitoring periods between individuals, variable severity of co-morbidities, no evidence of direct benefit – highly underpowered and study duration was too short

- Further appraisal of azathioprine in HIV- infected individuals is warranted to guide clinicians in the utility and monitoring of this cohort on this drug.