Journal of the International AIDS Society

Poster presentation

Open Access

Activity of etravirine on different HIV-1 subtypes: week 48 data of the pooled DUET trials and in vitro susceptibility in treatment-naïve patients

J Vingerhoets*[1], H Azijn[1], L Tambuyzer[1], I Dierynck[1], S De Meyer[1], L Rimsky[1], M Peeters[1], G De Smedt[1], MP de Béthune[1] and G Picchio[2]

Address: [1]Tibotec BVBA, Mechelen, Belgium and [2]Tibotec Inc, Yardley, USA
* Corresponding author

from Ninth International Congress on Drug Therapy in HIV Infection
Glasgow, UK. 9–13 November 2008

Published: 10 November 2008

Journal of the International AIDS Society 2008, **11**(Suppl 1):P189 doi:10.1186/1758-2652-11-S1-P189

This abstract is available from: http://www.jiasociety.org/content/11/S1/P189

Purpose of the study

Etravirine (ETR, TMC125) has shown good in vitro activity against primary HIV-1 group M isolates from different subtypes and has demonstrated durable efficacy in treatment-experienced, HIV-1 infected patients in the Phase III DUET trials. In vivo efficacy and in vitro activity of ETR against different HIV-1 subtypes were further investigated.

Methods

DUET patients were randomized 1:1 to ETR (200 mg BID) or placebo, both with a background regimen of NRTIs, darunavir/ritonavir and optional enfuvirtide. Subgroup analyses of the effect of HIV-1 subtype on the proportion of patients with viral load (VL) <50 HIV-1 RNA copies/mL (TLOVR imputation algorithm) were conducted on pooled week 48 data. Genotype/subtype and phenotype determinations were performed using the Virco® TYPE HIV-1 and Antivirogram™ assays, respectively. The effect of HIV-1 subtype on ETR fold change in EC50 value (FC) was analyzed in HIV-1 recombinant clinical isolates from treatment-naïve patients enrolled in other Tibotec trials (n = 872) that included 49% of HIV-1 subtype non-B (18% CRF01_AE; 16% C; 5% A1; 3% CRF12_BF; 2% CRF02_AG; 1% F1; 3% other).

Summary of results

In DUET, HIV-1 subtype was available for 594 and 595 patients in the ETR and placebo arms, respectively. The majority of these (93.8%) harboured HIV-1 subtype B. Among the non-B subtypes, CRF12_BF (2.1%), F1 (1.2%), and CRF02_AG (0.8%) were most prevalent. Baseline disease characteristics (VL, CD4, ETR FC, DRV FC, PSS) were similar between patients with different subtypes, except for a higher number of sensitive NRTIs used in those with HIV-1 subtype non-B. In the ETR arm, virological responses at week 48 were 59.9% (336/561) for HIV-1 subtype B vs. 72.7% (24/33) for all other HIV-1 subtype non-B, as compared to an overall response of 60.6%.

These data were further supported by in vitro results that indicated a comparable median (IQR) ETR FC in virus isolates from treatment-naïve patients infected with subtype B or non-B (1.1, 0.8–1.6 or 1.2, 0.8 1.7), respectively.

Conclusion

In the DUET studies, ETR was equally effective in suppressing viral replication in patients infected with HIV-1 subtype B or non-B. Furthermore, both subtype B and non-B HIV-1 recombinant clinical isolates from treatment-naïve patients exhibited comparable levels of in vitro phenotypic susceptibility to ETR. These results confirmed the broad activity of ETR against HIV-1.