A fixed dose combination of elvitegravir, cobicistat, emtricitabine, tenofovir disoproxil fumarate for the initial treatment of HIV-2 infection: 24 week results of a pilot study in Senegal, West Africa.

(*24-Week Results of Elvitegravir-Cobicistat-Emtricitabine-Tenofovir DF for HIV-2*)

Abstract : 961

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BACKGROUND:

There is an urgent need for safe and effective antiretroviral therapy (ART) for HIV-2 infection. HIV-2 treatment is complicated by intrinsic resistance to many FDA-approved HIV-1 drugs, and multidrug-resistance is common in individuals failing ART. There are limited options for 1st- and 2nd-line ART for HIV-2 in resource-limited settings. An increasing body of data suggests that integrase inhibitor-based regimens may be of potential utility for the treatment of HIV-2. We have undertaken the first clinical trial of a once-daily fixed-dose combination pill containing elvitegravir, cobicistat, emtricitabine, tenofovir disoproxil fumarate (EVG/c-FTC-TDF; Stribild (Gilead Sciences, Inc.)) to assess the effectiveness of this regimen in HIV-2-infected subjects in Senegal, West Africa.

AIMS:

To Assess the Safety and Efficacy of once-daily single tablet regimen of elvitegravir, cobicistat, emtricitabine, tenofovir disoproxil fumarate (EVG/c-FTC-TDF; Stribild) in ARV-naïve HIV-2 infected adults in Senegal, West Africa. Results presented are a 24 week interim analysis.

METHODS:

The study (Clinical Trials #: NCT02180438) was conducted at the Service des Maladies Infectieuses Ibrahima DIOP Mar, Centre Hospitalier Universitaire de Fann, Universite Cheikh Anta Diop de Dakar, Dakar, Senegal. HIV-2-infected, ART-naïve adults with WHO stage 3 or 4 disease or CD4 counts below 750 cells/mm^3 were eligible for this open-label pilot trial, with planned enrollment of 30 subjects and follow-up for 48 weeks. Enrolled subjects are monitored every four weeks for clinical and immuno-virologic outcomes as well as adverse events. For this 24-week interim analysis, changes in HIV-2 plasma viral load, CD4 counts, adverse events, all-cause mortality and loss to follow-up were analyzed. Undetectable HIV-2 plasma RNA viral load was defined as <10 copies/ml (Chang *et al.* JCV 2012).

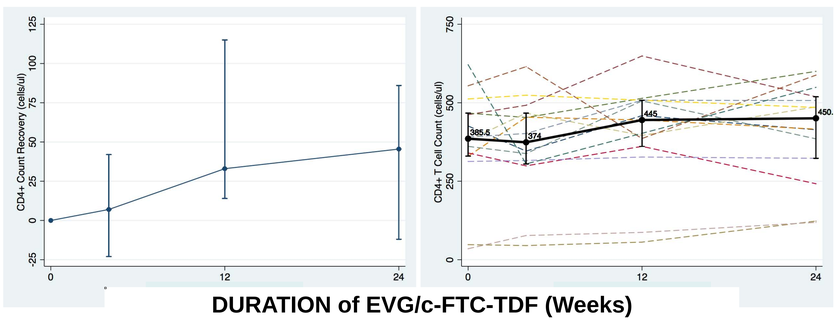
RESULTS:

TABLE 1. Baseline Characteristics of ARV-naïve HIV-2 infected subjects initiating elvitegravir, cobicistat, emtricitabine, tenofovir disoproxil fumarate and completing 24 weeks follow up (n=14)

Screened:	32	
Enrolled:	27	
Completed 24 weeks:	14	
Withdrawn:	1	
Dead:	0	
Lost to follow up:	0	
Female	12	(85.7%)
Age, median (range)	47	(40-52)
Year of HIV diagnosis, median (IQR)	2006	(2003-2010)
Baseline WHO stage		
1	6	(42.9%)
2	6	(42.9%)
3	2	(14.3%)
4	0	(0%)
Baseline BMI, median (IQR)	25.1	(20.6-30.5)
Baseline CD4 count, cells/mm^3, median (IQR)	386	(330-467)
Baseline HIV-2 plasma viral load		
Not detected, n (%)	3	(21.4)
Detected, <10 copies/ml (quantifiable limit), n (%)*	2	(14.3)
Detected, copies per mL, median (range)#	28	(10-62)

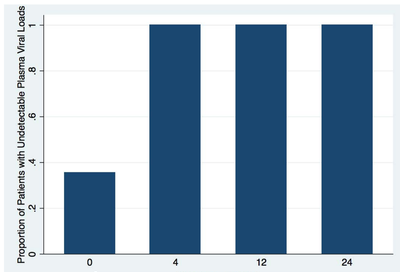
*** 10 copies/ml ; # Among those with quantifiable viral loads; Data as of 2/11/16**

CD4 Count Trajectories

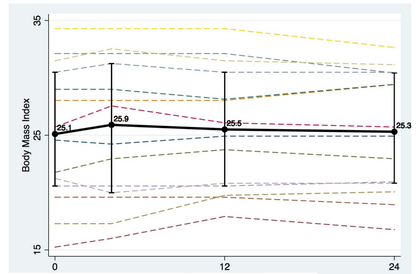


DURATION of EVG/c-FTC-TDF (Weeks)

HIV-2 Virologic Suppression



BMI Trajectories



DURATION of EVG/c-FTC-TDF (Weeks)

TABLE 2. DAIDS Laboratory Abnormalities*

	Screening	Week 4	Week 12	Week 24
Grade 1	7	9	4	6
Grade 2	3	1	2	3
Grade 3	0	1	0	1
Grade 4	0	0	0	0

*Abnormal Lab Values Included: Hb, WBC, Alkaline Phosphatase, Glucose
http://www.niaid.nih.gov/labsandresources/resources/daidsclinrsrch/documents/daidsaegradingtable.pdf

TABLE 3. Clinical Adverse Events (AE)

AE	Time	Grade	Outcome
Lower limb edema	Week 4	1	Resolved
Oral candidiasis	Week 4	1	Resolved (Rx=Fluconazole)

CONCLUSIONS:

Long-term outcomes of HIV-2 infected patients on ART in West Africa are suboptimal and new therapeutic options are needed. Initial data suggest that EVG/c-FTC-TDF, a once-daily single-tablet regimen, is safe, effective, and well-tolerated in this population. Our findings support the use of integrase inhibitor-based regimens for HIV-2 treatment.

ACKNOWLEDGEMENTS: We thank the study participants. This study was approved by the UW IRB and Senegal Ethics Committee (CNERS). UW-Dakar HIV-2 Study Group also include: Fatima Sall, Fatou Traore, Khadim Faye, Marie Pierre Sy, Bintou Diaw, Mbaye Ndoye, Amadou Bale Diop, Marianne Fadam Diome (Clinique des Maladies Infectieuses Ibrahima DIOP Mar, CHNU Fann, Universite Cheikh Anta Diop de Dakar, Dakar, Senegal); Alassane Niang, ElHadji Ibrahima Sall, Ousseynou Cisse, Jean Philippe Diatta, Raphael Bakhoum, Juliette Gomis, (Centre de Sante de Ziguinchor, Ziguinchor, Casamance, Senegal), Noelle Benzekri, John Lin, Nancy Kiviat, Sally Leong, Sara Masoum and Vincent Wu (UW, Seattle). Thanks to UW Clinical Retrovirology lab: Carol Gallardo, Eleanor Espinosa, Ming Chang and Bob Coombs.

FUNDING. These studies were supported by grants to: GSG from Gilead Sciences (USA) and University of Washington Center for AIDS Research (AI- 827757) and AIDS Clinical Trials Group Laboratory Center (AI-068636). Potential Conflict of interest: Dr. Gottlieb has received funding from Gilead Sciences (USA), Abbott Molecular (USA) and Alere, GmbH (Germany) for HIV related research.