

isolates. However, there is a need for further risk assessment associated with *Candida* infections.

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Two-drug regimen of dolutegravir plus lamivudine (DTG+3TC) is noninferior to dolutegravir plus tenofovir/emtricitabine (DTG+TDF/FTC) at 48 weeks in antiretroviral treatment-naïve adults with HIV-1 infection: subgroup analyses in the GEMINI studies



C. Orkin¹, N. Porteiro², M. Berhe³, R. Dretler⁴, P. Viciano⁵, Y. Tseng⁶, C. Oprea⁷, M. Johnson⁸, V. Kulagin⁹, C. Man¹⁰, J. Sievers¹⁰, A. Currie¹¹, M. Underwood¹⁰, A. Tenorio¹⁰, K. Pappa¹⁰, B. Wynne¹⁰, M. Aboud¹⁰, K. Smith¹⁰, M. Gartland¹⁰, C. Steinhart¹⁰, J. Gatell^{10,*}

¹ Queen Mary University

² Fundacion IDEAA

³ Texas Infectious Diseases Consultants

⁴ Infectious Disease Specialists of Atlanta

⁵ Hospital Universitario Virgen del Rocio

⁶ Kaohsiung Veterans General Hospital

⁷ Dr. Victor Babes Clinical Hospital for Infectious and Tropical Diseases

⁸ Royal Free Hospital

⁹ Clinical Center for Prevention and Treatment of AIDS and Infectious Diseases

¹⁰ ViiV Healthcare

¹¹ GlaxoSmithKline

Background and Purpose: In the GEMINI studies, the efficacy of DTG+3TC was recently shown to be noninferior to DTG+TDF/FTC at 48 weeks in treatment-naïve adults based on a 10% non-inferiority margin. We present efficacy and safety by demographic and baseline plasma HIV-1 RNA and CD4+ cell count subgroups.

Methods: GEMINI-1&-2 are identical, global, double-blind, Phase III studies that randomized treatment-naïve adults with Screening plasma HIV-1 RNA $\leq 500,000$ c/mL to treatment with DTG+3TC or DTG+TDF/FTC, stratified by Screening plasma HIV-1 RNA and CD4+ cell count (ClinicalTrials.gov: NCT02831673/NCT02831764). The primary endpoint was the proportion of participants with plasma HIV-1 RNA < 50 c/mL at Week 48 (Snapshot algorithm); estimates and CIs were based on a stratified analysis using Cochran-Mantel-Haenszel weights. The subgroup analysis was unadjusted.

Results: 714 and 719 adults were randomized and treated in GEMINI-1&-2, respectively. Efficacy results across age, gender, race, or baseline HIV-1 RNA were generally consistent with the overall analysis. Response rates in participants with baseline HIV-1 RNA $> 100,000$ c/mL were high and similar between arms. Six participants on DTG+3TC and 4 on DTG+TDF/FTC met protocol-defined virologic-withdrawal criteria through Week 48; none had treatment-emergent INSTI- or NRTI-resistance mutations. Overall rates of AEs were similar between arms, with low rates of withdrawals due to AEs in both arms (GEMINI-1&-2 pooled: DTG+3TC 15/716 [2%] vs DTG+TDF/FTC 16/717 [2%]). More drug-related AEs were reported with DTG+TDF/FTC (GEMINI-1&-2 pooled: DTG+3TC 126/716 [18%] vs DTG+TDF/FTC 169/717 [24%]). The frequency of AEs was generally similar across subgroups.

Conclusions: Subgroup analyses at Week 48 of GEMINI-1&-2 based on baseline disease and demographic characteristics were generally consistent with overall study results, demonstrating noninferiority of DTG+3TC to DTG+TDF/FTC in treatment-naïve adults with Screening HIV-1 RNA $\leq 500,000$ c/mL. These results further demonstrate DTG+3TC is an option for initial treatment of HIV-infected patients across a spectrum of disease characteristics and patient populations.

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Epidemiology of Invasive Pneumococcal Disease in the Kingdom of Saudi Arabia – A Rapid Review of the Literature



M. Khalaf*, S. Badur, A. Mohy, S. Noibi, S. Ozturk, L. Soumahoro

GSK

a. Background and Purpose: A literature review of the epidemiology of Invasive Pneumococcal Diseases (IPD) in the Kingdom of Saudi Arabia will provide a synthesis of available evidence to inform choice of available vaccines (PHiD-CV and PCV-13).

b. Methods: A rapid review of IPD epidemiology literature in the Kingdom was conducted. Eligibility criteria included studies conducted in children (aged < 5 years) with diagnosis of meningitis, bacteraemia and sepsis. Data on adults and mass gatherings were excluded. Manual and Embase searches were conducted. Study inclusion date was from 1st January 1981 to 29th July 2018. Studies reported in English language were reviewed. Key study design characteristics of studies included was abstracted. Descriptive statistics were used to summarise results across studies.

c. Results and Discussions: Among the 20 publications meeting the eligibility criteria, 11 were from single-centre studies, 9 from multisite studies. Incidence of IPD cases ranged from 0.8 per 1000 (1990–1994) to 50 per 1000 children (1995–2000). One study reported incidence data pre- (7.2 per 100,000) and post-vaccine introduction (2.15 per 100,000). Eight studies reported IPD seroprevalence and 19 studies reported antibiotic susceptibility patterns. By year 2000, serotypes 3, 4, 6A, 9V, 14, 15, 19, 19A, 19F and 23F were most prevalent. Decline in serotypes 3, 4, 6A, 9V, 19A was reported after PCV-13 introduction in 2010. Serotypes 4, 6B, 18C, 19, 19F and 23F were still frequently isolated by 2012. Multi-drug resistance ranged from 7.10% (1999–2003) to 63% (2007–2009).

d. Conclusions: Reduction in overall IPD in the Kingdom, following introduction of a pneumococcal vaccine with more than 98% coverage, is consistent with the global experience (PHiD-CV and PCV-13). Variability in local epidemiology may be due to differences in study methods. IPD sentinel surveillance is desired in the Kingdom. This rapid review provides expedient evidence for policy makers in the Kingdom.

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