



Antiretroviral agents in persons with HIV with relative contraindications: Are we prescribing in accordance with BHIVA guidelines?

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BACKGROUND

- While modern ART has improved survival for persons with HIV (PWH)¹, certain ART agents may exacerbate comorbidities.
- In the following individuals, and where acceptable alternatives are available, BHIVA treatment guidelines² recommend **avoidance of:**
 - High cardiovascular disease (CVD) risk:** abacavir (ABC)
 - Renal impairment with chronic kidney disease (CKD) stages 3-5:** tenofovir-DF (TDF) and/or atazanavir (AZV)
 - Cognitive impairment and/or current or past history of mental health conditions:** efavirenz (EFV)

AIM

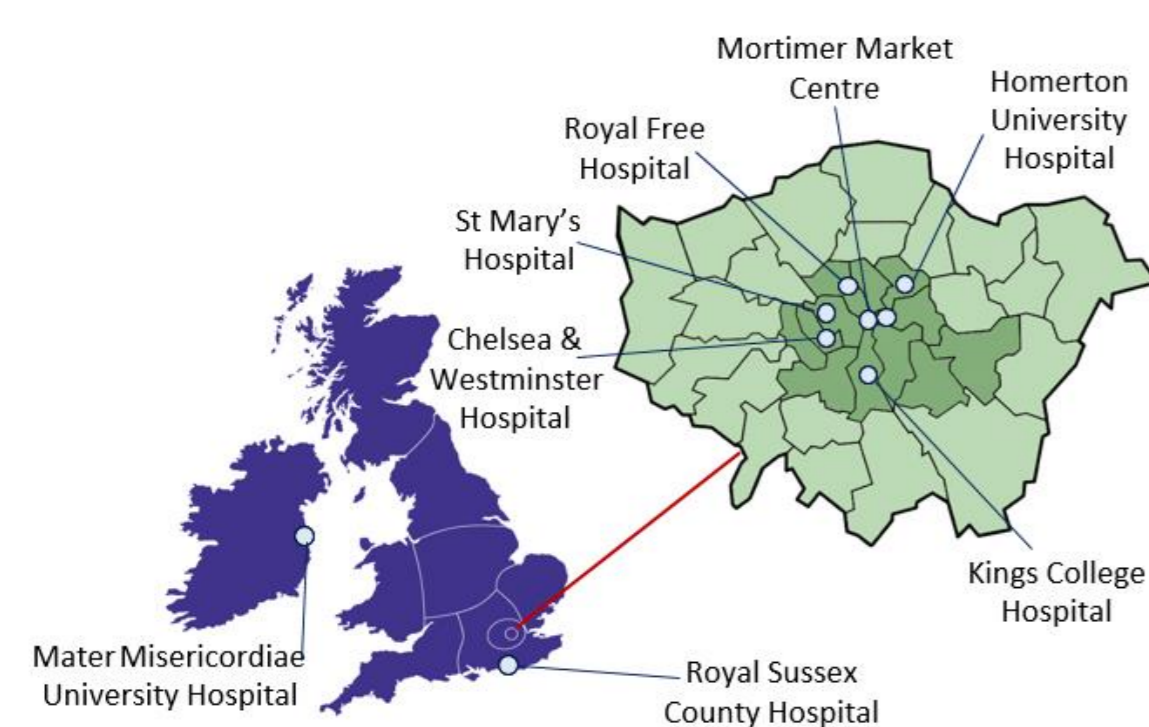
To investigate whether PWH in the POPPY study were receiving ART with the relative contraindications highlighted above.

METHODS

PARTICIPANTS

- The Pharmacokinetics and clinical Observations in PeoPle over fifty (POPPY) study is a multicentre, prospective, observational study assessing clinical outcomes of PWH over the age of 50 in the UK and Ireland³ (Figure 1).
- Participants were recruited between April 2013 – Dec 2015.

Figure 1: Participating centres in the POPPY study



DATA COLLECTION

- Information was gathered from POPPY participants via face-to-face interview by trained clinical research staff at the baseline visit, with a focus on comorbidities and medication.

DEFINITIONS OF COMORBIDITIES

- High CVD risk:**
 - 10-year predicted risk >10% on QRISK2 or Framingham risk prediction calculators, or
 - a history of ischaemic heart disease (IHD)
- Renal impairment with chronic kidney disease (CKD) stages 3-5:**
 - eGFR <60mL/min/1.73m² (using CKD-EPI calculator)
- Cognitive impairment (CI):**
 - cognitive function scores meeting the HIV-associated neurocognitive disorders (HAND) definition
- Symptomatic cognitive impairment (CI):**
 - subjects with HAND answering 'yes' to ≥ 1 Simioni cognitive symptoms questions
- Mental health conditions:**
 - current or previous clinical diagnosis of depression, anxiety, psychiatric disorders or sleep disturbances

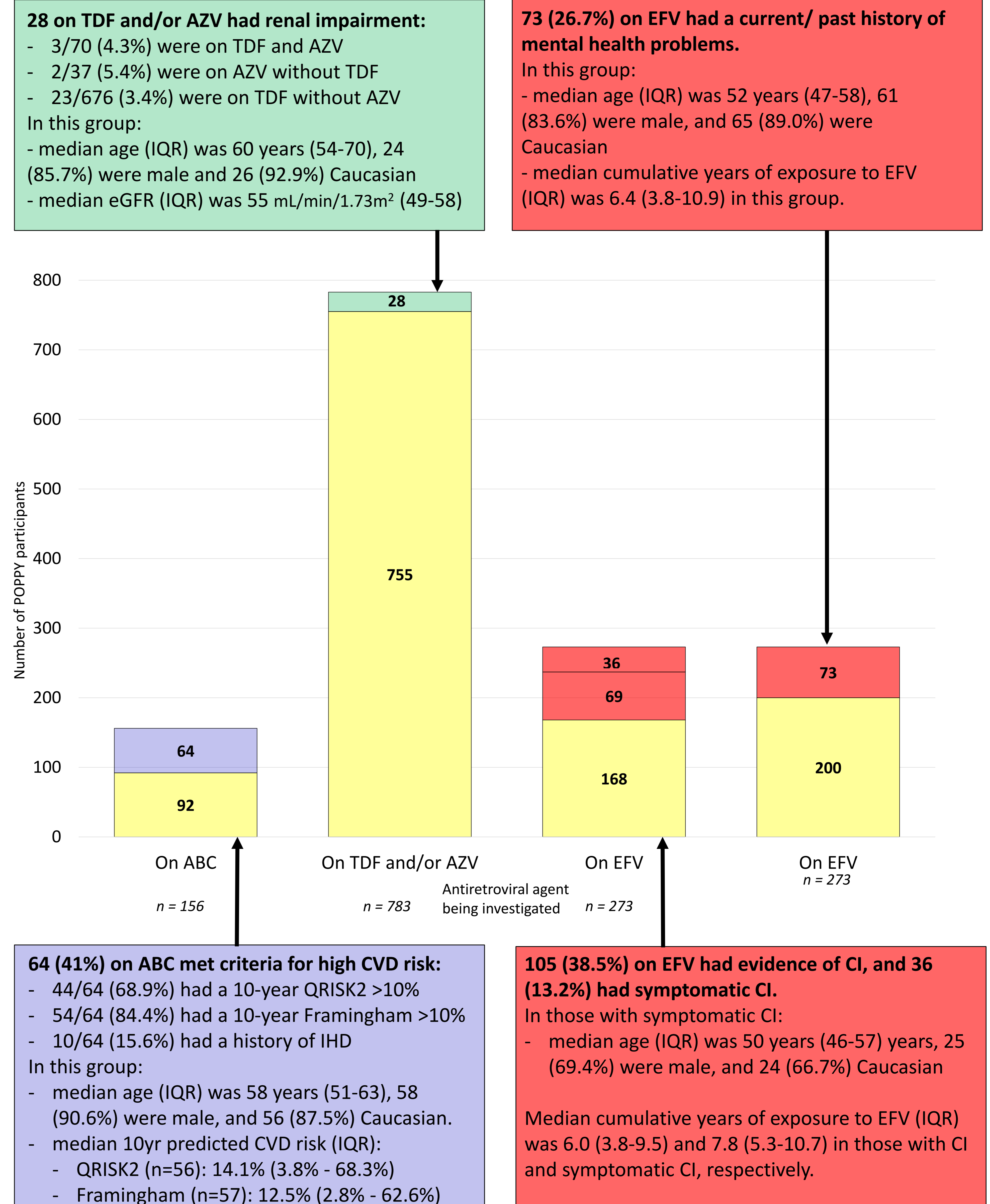
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POPPY Management Team: Daphne Babalis, Marta Boffito, Laura Burgess, Paddy Mallon, Frank Post, Caroline Sabin, Memory Sachikonye, Alan Winston
 POPPY Scientific Steering Committee: Jane Anderson, David Asboe, Marta Boffito, Lucy Garvey, Paddy Mallon, Frank Post, Anton Pozniak, Caroline Sabin, Memory Sachikonye, Jaime Vera, Ian Williams, Alan Winston
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 POPPY methodology/statistics/analysis: Caroline Sabin, Davide De Francesco, Emmanouil Bagkeris
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RESULTS

- In total, 1046 POPPY participants were receiving ART at their baseline visit.

Figure 2: Number of POPPY participants on abacavir, tenofovir-DF and/or atazanavir, and efavirenz, respectively. Participants in the yellow columns are on the ART-regimens above and deemed not to have the relative contraindications being investigated. Participants in the green, purple and red columns are the groups deemed to have high cardiovascular disease risk, renal impairment with chronic kidney disease stages 3-5, and cognitive impairment and/or current or past history of mental health conditions, respectively.



Abbreviations: ABC = abacavir, TDF = tenofovir disoproxil fumarate, AZV = atazanavir, EFV = efavirenz, IQR = interquartile range, CVD = cardiovascular disease, IHD = ischaemic heart disease, eGFR = estimated glomerular filtration rate, CI = cognitive impairment

DISCUSSION and CONCLUSION

- Whilst few PWH receiving TDF and/or AZV had renal contraindications, high proportions of those receiving ABC and EFV had high CVD risk and cognitive problems and/or mental health conditions, respectively.
- Baseline study visit for all POPPY participants took place prior to the routine availability of tenofovir alafenamide, which might explain the high proportion of subjects on ABC despite a high CVD risk.
- Limitations of this substudy include the lack of longitudinal data, the subjective nature of cognitive symptomatology and the relative contraindications were collected as part of study procedures only and results were not relayed back to the treating clinician.

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