

Polypharmacy and polymorbidities in a specialised HIV clinic for patients over the age of 50: need for geriatrician intervention?

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Background: As people living with HIV (PLWH) live longer, the implications of ageing with HIV are becoming more apparent; more than 1/3 of PLWH accessing HIV care in the UK are now aged ≥ 50 years. Challenges specific to the management of older PLWH include polymorbidities, frailty, polypharmacy and drug-drug interactions (DDI).

Materials and methods: We aimed at determining the prevalence of polymorbidities (≥ 2 comorbidities) and polypharmacy (≥ 5 medications) in PLWH attending the HIV over50 clinic during a 12-month period (01/05/17-30/04/18). PLWH were stratified into 3 groups based on polypharmacy assessment: no polypharmacy (G1), polypharmacy (≥ 5 medications) (G2), heavy polypharmacy (≥ 10 medications) (G3). Potential DDI between antiretrovirals and non-antiretrovirals were assessed using the University of Liverpool HIV Drug Interactions website. Frailty assessment was performed using the Rockwood Clinical Frailty Scale (RCFS) from 01/02/18-30/04/18. Sub-analyses were conducted to assess changes in patients' interaction profiles and frailty scales with increasing polypharmacy.

Results: Out of the 229 PLWH referred to HIV over50 clinic, 120 were included in the analysis, the majority of them were Caucasian men who have sex with men (MSM). Polypharmacy and polymorbidities were recorded in $>70\%$, e.g. hypertension in 52% and diabetes in 26%, with a significant correlation between being on polypharmacy and presenting with polymorbidities ($p < 0.001$). The proportion of significant DDI between antiretrovirals (ARVs) and non-antiretrovirals significantly increased according to the extend of polypharmacy (G1-0.0% vs. G2-11.1% vs. G3-14.3%: $p = 0.006$). 27 PLWH were screened for frailty and showed: a RCFS of 1 (48.1%), followed by scale 2 (25.9%) and scale 3 (22.2%). 1 patient had scale 4. No significant correlation was seen between polypharmacy assessment and frailty scales in this small sub-group analysis.

Conclusions: Although we have only recently started to assess frailty in our HIV over50 clinic, we observed a high number of PLWH on polypharmacy and with polymorbidities, suggesting that the rate of medical problems/elderly syndromes (e.g. frailty, falls, etc.) is increasing as PLWH become older. Therefore we have set up an HIV/Care of the Elderly co-specialty clinic to identify measures to prevent/reduce risk of progression to more advance frail states.

References:

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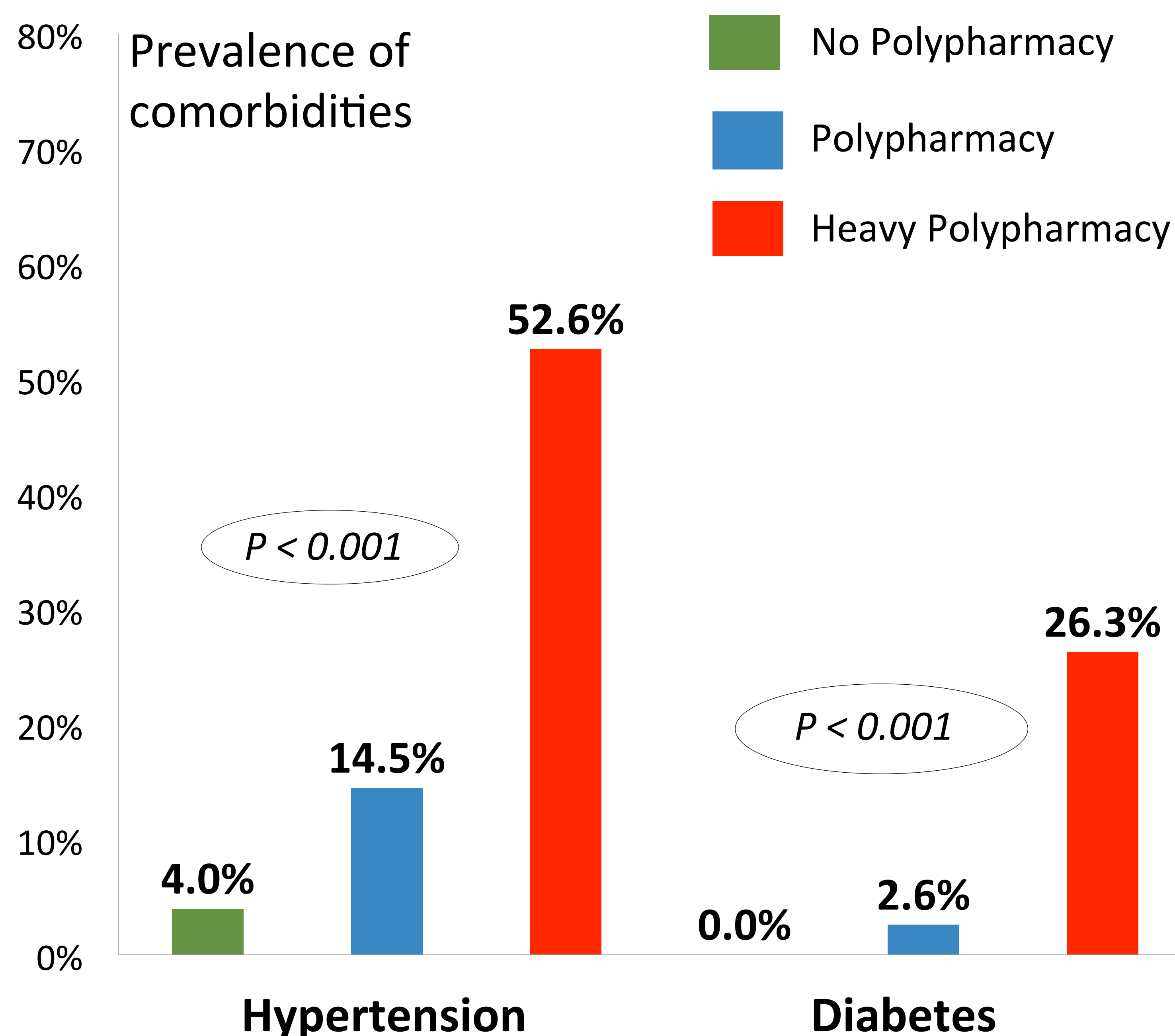


Figure 1: Prevalence of comorbidities (hypertension and diabetes) in each polypharmacy assessment group.

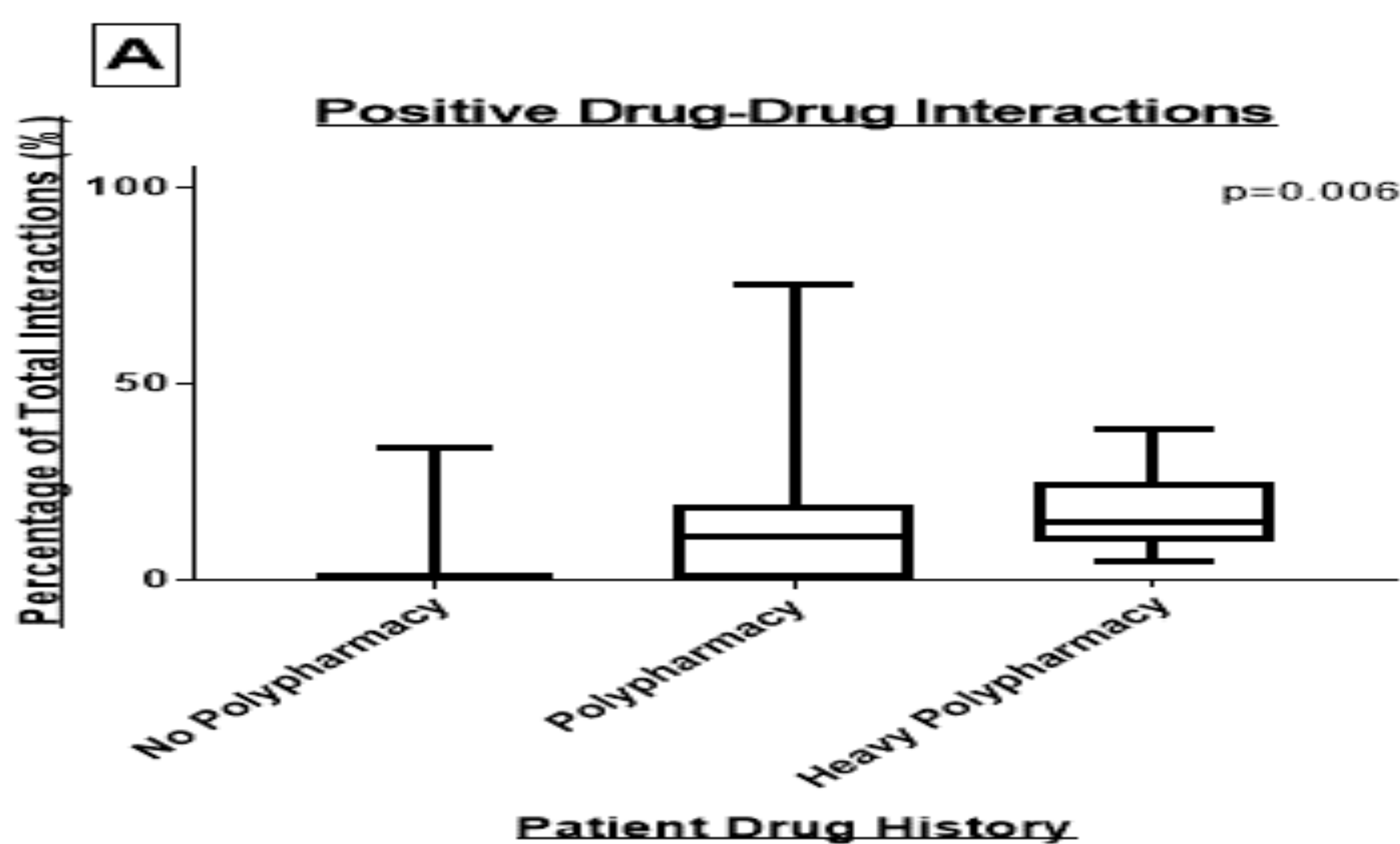


Figure 2: Boxplots of the percentage of positive drug-drug interactions between ARVs and non-ARVs in each polypharmacy assessment group.

Linear Regression of the Effect of Polypharmacy on Frailty

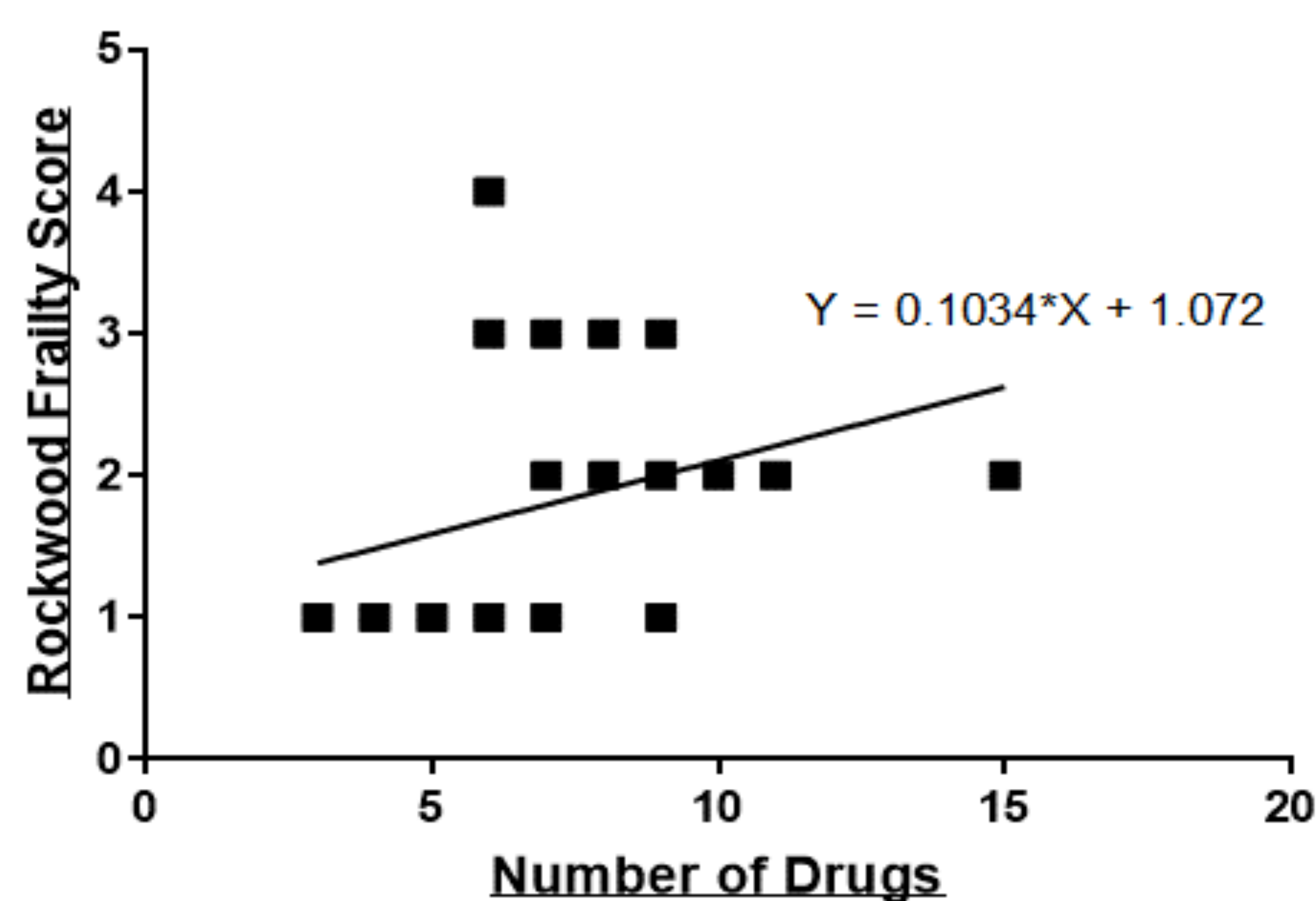


Figure 3: Linear regression between the number of drugs prescribed with the Rockwood Clinical Frailty Scale score. 27 patients were included in this sub-analysis. This linear regression showed a positive association, however this was non-significant [$p = 0.168$] and only accounted for 7.5% of variability in the frailty scores for this sample [$R^2 = 0.075$].