ABSTRACT

Introduction: With the observed increase in elderly living with multi-morbidity, global trends of polypharmacy is on the rise. Medication non-adherence is considered a common consequence of polypharmacy, especially among the elderly.

Objective: To describe polypharmacy, medication adherence and associated factors among elderly patients attending general medical clinics in the National Hospital of Sri Lanka (NHSL).

Methods: A descriptive cross-sectional study was conducted among elderly patients attending general medical clinics of NHSL, in August 2019. A pretested, interviewer administered questionnaire was given to 426 participants selected by systematic sampling. Polypharmacy was defined as the daily use of five or more medications. Medication adherence was measured by an adapted Medication Adherence
Questionnaire. Descriptive statistics, Chi-square test, and multivariate logistic regression controlled for multiple confounders were used in the analysis.

Results: The majority of the study sample was female (54%), married (77.7%) and aged between 65-70 years (61.5%) with 29.6% of them currently occupied. Polypharmacy was 81.75%, while 24.2% of the participants had extreme polypharmacy. The mean number of medications used by a patient was 8.41 (SD=3.17, median=8).

Odds of polypharmacy were high with multimorbidity (OR=6.57, 95%CI 3.79-11.38), including ischemic heart disease (OR=4.25, 95%CI 2.45-7.39), diabetes mellitus (OR=2.58, 95%CI 1.54-4.31), and hypertension (OR=1.99, 95%CI 1.17-3.39). Single status, unemployment, and moderate-income increased the likelihood of extreme polypharmacy along with multimorbidity. Extreme polypharmacy increased the risk of constipation, insomnia, and loss of appetite.

A majority of participants (63.4%) were adherent to medication. Unintentional and purposeful non-adherence were 28.4% and 4.0% respectively. Medication adherence reduced with delayed drug intake (OR=0.36, 95%CI 0.23-0.55), beliefs on organ damage (OR=0.49, 95%CI 0.31-0.75), poor accessibility to drugs (OR=0.36, 95%CI 0.23-0.55), and disease-related factors as regurgitation

(OR=0.27, 95%CI 0.10-0.74). Increased odds were observed with the necessity (OR=2.56), effectiveness (OR=2.29) and the identification of drugs (OR=1.59).

Conclusions & Recommendations: Polypharmacy was high among the elderly and was associated with multimorbidity. Despite negative connotations polypharmacy neither decreased medication adherence nor was associated with its consequences except at extreme polypharmacy. The Multi-disciplinary approach in developing a combined management plan would reduce polypharmacy while improving health literacy would increase medication adherence among the participants.

Keywords: elderly, polypharmacy, extreme polypharmacy, medication