

**00078 Factors Contributing to Hospital-acquired Hypoglycaemia in Type 2 Diabetes Mellitus Elderly Patients in an Acute Hospital in Singapore: A Retrospective Study**

*Lee Jue Lei Daphne<sup>1</sup>, Sri Rahayu Masjum<sup>1</sup>, Norasyikin Hassan<sup>1</sup>, Jeanette Ignacio Mary<sup>2</sup>*

<sup>1</sup>Changi General Hospital, <sup>2</sup>National University of Singapore

**Aims:** The aim of this study is to explore the demographic and clinical factors which affect hypoglycaemic severity and risks, specific to Singapore's multi-ethnic population. Hypoglycaemia is a common complication in blood glucose management in Type 2 Diabetes Mellitus (T2DM) patients and has a high prevalence in the elderly, however, limited local clinical studies have been conducted to explore its contributing factors. As hypoglycaemia can result in adverse physiological and economic burden if not managed adequately, knowledge is required to be built on to reduce hypoglycaemic severity. Findings will value-add to Diabetes care provision.

**Methodology:** A quantitative retrospective chart review was conducted to identify patients with T2DM admitted in general wards from 1st May 2016 through 31st May 2017, with capillary blood glucose levels  $\leq 3.9$ mmol/L. Opportunistic sampling was used to recruit the minimum sample size of patients fulfilling recruitment criteria, whose medical records were retrieved. Data were abstracted using the Clinical Data Collection Form, and analysed with parametric tests. Statistical significance was set at P-value < 0.05.

**Result:** Data from a total of 245 electronic medical records were reviewed and collected. Univariate analyses showed statistical significance between hypoglycaemic severity and total number of non-antidiabetic medications (P-value = 0.029), as well as, presence of fasting procedure (P-value = 0.002). Multiple linear regression showed a presence of fasting procedures to result in lower hypoglycaemic severity.

**Conclusion:** Contributing factors of hypoglycaemic severity and risks were found to be the total number of non-diabetic medications and presence of a fasting procedure. Although they proved statistical association with hypoglycaemic severity and risks, no conclusive evidence was drawn to indicate their true cause. Future research is required to further explore how other demographic and clinical factors affect hypoglycaemic severity and risks.