



Service Priorities and Programmes
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Submitting author: Dr Chun Keung SHUM

Post title: Resident Specialist, Tuen Mun Hospital

To Reduce Mortality and Hospitalizations with Less Stringent Glycemic Control in Institutionalized Diabetic Older Adults

Shum CK(1), Leung KS(1), Kwan YK(1), Mok CK(1)

(1)Department of Medicine and Geriatrics, Tuen Mun Hospital, The New Territories West Cluster, Hospital Authority, Hong Kong

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Introduction

In older adults with multiple comorbidities and functional limitations, the harms of intensive glycemic control may outweigh the benefits. Recent diabetes guidelines suggested that glycemic control should be individualized and less stringent glycemic control is acceptable in frail older adults. However, evidence-based data on institutionalized older adults are lacking.

Objectives

To provide a reference for the recommended HbA1c in institutionalized diabetic older adults with better clinical outcomes in terms of mortality and hospitalizations.

Methodology

A retrospective cohort of Chinese older adults (age ≥ 65 years) with diabetes mellitus living in residential care homes, under the care of the New Territories West Cluster, Hospital Authority, with HbA1c measurements during 1 January 2013 to 31 December 2013 were identified. They were divided into groups according to their HbA1c:

Result

376 institutionalized older adults with diabetes (mean age 81.6 ± 6.7 years) were included. The majority had multiple comorbidities (Charlson Comorbidity Index 4.7 ± 2.1) and functional limitations (70.8% with impaired mobility, 10.9% on tube feeding).

The lowest 1-year mortality and hospitalization rate were found in the group with

HbA1c 8.5-9.9%. Multivariate analyses showed that there were J-shaped associations between HbA1c and hazard ratio for mortality and between HbA1c and odds ratio of recurrent hospitalization with best outcomes in those with HbA1c 8.5-9.9%. Age (HR 1.05 per 1 year increase), presence of stage 5 chronic kidney disease (HR 3.43) and peripheral vascular disease (HR 2.72), mobility (chairbound/bedridden) (HR 3.69), polypharmacy (≥7 regular drugs) (HR 1.93) and albumin level (HR 0.86 per 1 g/L increase) were independent predictors of mortality. Among those with intensive glycemic control (HbA1c Institutionalized diabetic older adults with HbA1c 8.5-9.9% had the lowest 1-year mortality and hospitalization rate. This may provide a reference for the recommended HbA1c in this population. Our findings suggested that a substantial proportion of this population was potentially over-treated. De-intensification of drug treatment with less stringent glycemic control by our Community Geriatric Assessment Team can potentially reduce mortality and hospitalizations in this population.