

ABCD – rising star award

Frailty, older adults and diabetes

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Abstract:

Introduction

The population is ageing, impacting how we practice medicine. Age influences glucose homeostasis even before frailty is considered. Diabetes clinicians must consider how an ageing individual's life-expectancy, co-morbidities and circumstances influence choices about care. I am exploring this in multiple contexts:

Non-diabetic hyperglycaemia (NDH) in older adults

In older people, red cell turnover lengthens, increasing the exposure of red cells to glucose in the intravascular environment. Consequently, HbA1c will be higher in older adults than in younger people with the same glucose levels. This creates a tendency to over-diagnose diabetes, or NDH, in older people. 11% of referrals to the diabetes prevention program are over 80-years-old. This population stands to gain the least from interventions to encourage weight loss, and may even exacerbate sarcopenia in susceptible individuals. I argue for age-adjusted cut-offs for NDH to mitigate this risk (DOI: 10.1111/dme.15177). This could focus efforts on younger individuals who would benefit more from focussed lifestyle intervention.

Inpatient diabetes management in the older adult

The over-estimation of HbA1c in older adults also leads to potential over-treatment of individuals living with diabetes, increasing the risk of hypoglycaemia. Hypoglycaemia in older adults is associated with increased falls, fractures and all-cause mortality and avoidance of hypoglycaemia should be prioritised to prevent this. Consequently, expert consensus guidelines recommend relaxation of glucose targets as frailty progresses. Work within University Hospitals Sussex has demonstrated that inpatient glucose targets are rarely used, and that the risk of diabetes over-treatment increases as frailty progresses in those with type 2 diabetes. I advocate for the introduction of frailty adjusted glucose targets in hospital and have presented this work at Diabetes UK professional conference.

Type 1 diabetes and frailty

Advances have also allowed more people with type 1 diabetes to reach older ages, with more exposed to the hazards of ageing, including frailty. I have published a literature review highlighting how little research addresses type 1 diabetes and frailty (DOI: 10.1111/dme.15344). Experience suggests individuals with type 1 diabetes are genuinely fearful of what may happen in older age, particularly if independence with diabetes self-management is lost. I am addressing this research gap with a study assessing whether frailty affects glycaemia in older adults with type 1 diabetes. In addition, I am conducting a qualitative study exploring the experiences and expectations for the future of older adults living with type 1 diabetes.

Type 1 diabetes and dementia

Diabetes is associated with increased rates of cognitive impairment. The dual diagnosis of dementia and type 1 diabetes is particularly challenging given the necessity for intensive self-management.

Carers, are often not able to take-over management and the individual living with dementia is often left having to enter residential care. I have identified this as another area where research is lacking and am interested how technological advancements could assist in this complex area.

Conclusion

I have developed a wide-ranging interest in the issues that older adults face within diabetes care. I have focussed on clinical issues where simple changes could lead to substantially improved outcomes.