HbA1c and the severity of acute pancreatitis: a prospective cohort study in the UK Biobank

Introduction

• In a previous meta-analysis, we discovered a significant association between elevated HbA1c levels and a higher risk of severe acute pancreatitis (AP) \( (OR = 2.14, 95\% CI 1.32-3.48). \)

• To further investigate this relationship, we conducted a new study using the UK Biobank – a dataset comprising clinical information from over half a million participants in England, Wales, and Scotland [1].

Aims

1. To determine the association between HbA1c and AP severity
2. To determine the association between HbA1c and the development of local pancreatic complications
3. To identify associations between HbA1c and systemic complications including mortality

Methods

Identification: Cases of AP were identified using ICD-10 and ICD-9 codes.

Severity Stratification: Defined by the development of complications within 30 days of diagnosis, or any significant procedures related to their diagnosis were performed, identified through OPCS codes.

Analyses:
• Patients were divided into three groups based on HbA1c levels and severe the incidence of cases, local/systemic complications, and mortality rates were examined
• Statistical significance was assessed using the Cochran–Armitage test and multivariable logistic regression for patients with and without diabetes.

Results

A significant increasing trend in AP cases was observed with rising HbA1c levels \( (p=0.0126). \)

Conclusions

• Elevated HbA1c remains potentially useful in identifying patients without diabetes who are at a heightened risk of AP mortality
• A comprehensive international cohort study with rigorous diagnostic protocols for local complications and proactive measures to include participants with higher HbA1c values should be performed to definitively assess the relationship.