INPLASY

The demographic, clinical characteristics and outcomes of patients with Ketosis Prone Diabetes: A Systematic Review and Meta-analysis

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202390053

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 September 2023 and was last updated on 15 September 2023.

INTRODUCTION

Review question / Objective The demographics, clinical characteristics and outcomes of patients with ketosis prone diabetes.

Rationale Ketosis prone diabetes or Flatbush diabetes is a heterogeneous syndrome characterised by diabetic ketoacidosis or unprovoked ketosis at presentation in the absence of typical phenotype of autoimmune type 1 diabetes. Despite increased recognition of this type of diabetes, the demographics, clinical characteristics and outcome of patients with ketosis prone diabetes to date is unclear. This systematic review will provide the most up to date information related to the demographics, clinical characteristics and outcome of patients with ketosis prone diabetes.

Condition being studied Patients diagnosed with ketosis prone diabetes or Flatbush diabetes.

METHODS

Search strategy PubMed (from inception to Sept 2023), Scopus (from inception to Sept 2023) and reference lists of articles.

Participant or population Patients diagnosed with ketosis prone diabetes or Flatbush diabetes.

Intervention Not applicable.

Comparator Not applicable.

Study designs to be included Case report, case series, non-randomised controlled trials or randomised controlled trials where individual data are available for analysis.

Eligibility criteria Patients diagnosed with ketosis prone diabetes or Flatbush diabetes.

Information sources Only published case report, case series, non-randomised controlled trials or

randomised controlled trials where individual data are available for analysis.

Main outcome(s)
A) Demographic:
a) Age
b) Gender
c) Ethinicity
d) BMI
B) Clinical characteristics at diagnosis:
a) HbA1c
b) C-peptide (Fasting and stimulated)
c) Ketosis/Ketonuria
d) pH
e) Absence of auto-antibodies including either GAD-65, insulinoma antigen 2 [IA-2], zinc transporter 8 [ZnT8]
f) Lipid profiles including HDL, LDL and triglyceride
g) Family history of diabetes mellitus
C) Outcomes:
a) Time for change of insulin therapy to anti-hyperglycaemic agents or no treatment
b) Length of stay in hospital
c) Complications
d) HbA1c at follow up.

Additional outcome(s) Any relevant additional outcomes.

Quality assessment / Risk of bias analysis JBI Critical Appraisal Checklist for Case Reports, Case series or other relevant studies to assess the methodological quality of a study and to determine the extent to which a study has addressed the possibility of bias in its design, conduct and analysis.

Strategy of data synthesis Pooled point estimates of prevalence values and 95% confidence intervals for all the demographic and clinical characteristics at diagnosis. Pooled point estimates of the outcomes in terms of incidence or means and their respective 95% confidence intervals. The random effects model via the DerSimonian and Laird method will be used to pool the data.

Subgroup analysis Subgroup analysis will be performed according to gender and ethnicity and any potential effect modifiers where the prevalence of the covariates or the outcome incidence can differ across the levels of the potential effect modifier.

Sensitivity analysis Relevant sensitivity analysis will be performed if necessary.

Language restriction English.

Country(ies) involved Ireland, USA.

Other relevant information Not applicable.

Keywords Ketosis prone diabetes, Flatbush diabetes.

Dissemination plans Conference and online publications.

Contributions of each author
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