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ORIGINAL ARTICLE

Prevalence and quality of care indicators of type 2 diabetes in the population of the Basque Country (Spain)

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KEYWORDS
Administrative data;
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Abstract
Objective: The global prevalence of diabetes mellitus has reached epidemic proportions, and consequently the prevention and management of the disease is now a major public health challenge. This study aims to determine the prevalence of type 2 diabetes mellitus (T2DM) in the Basque Country, and identify new cases and the management of the disease based on data sourced from administrative databases.
Methods: Records of all citizens living in the Basque Country aged ≥35 were reviewed and an algorithm was established to detect the presence of T2DM from registered diagnoses and prescriptions. Information from a four-year period was extracted detailing the demographic variables, requirements recommended by clinical practice guidelines, the level of management of the disease in accordance with local guidelines and the presence of ischemic heart disease.

Abbreviations: BMI, body mass index; BP, blood pressure; CVR, cardiovascular risk; CVRFs, cardiovascular risk factors; CPG, clinical practice guidelines; DBP, diastolic blood pressure; EHR, electronic health records; HbA_{1c}, glycosylated hamoglobin; LDLc, LDL-cholesterol; SBP, systolic blood pressure; T2DM, type 2 diabetes mellitus.

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Results: In 2011, there were 134,421 diagnosed cases of T2DM, representing a known prevalence of 9.12%. There were 8,896 new cases. The three main control criteria, glycosylated haemoglobin (HbA_{1c}), LDL-cholesterol (LDLc) and blood pressure (BP), were met in 23.2% of people diagnosed with ischemic heart disease diagnosis and in 24.5% of people without a diagnosis of ischemic heart disease.
Conclusions: The prevalence observed in the Basque Country is lower than that observed in Spain, and the achievement of targets for HbA_{1c}, BP, and LDLc was slightly better, except the BP values, which were similar. The data recorded in this study could lead to the development of strategies to improve clinical care for patients with type 2 diabetes.

PALABRAS CLAVE
Datos administrativos;
Control;
Epidemiología;
Prevalencia;
Diabetes Mellitus tipo 2

Prevalencia e indicadores de calidad de la atención de la diabetes mellitus tipo 2 en la población del país vasco (España)

Resumen
Objetivos: La prevalencia mundial de la diabetes mellitus tipo 2 (DM2) ha adquirido niveles de epidemia y su prevención y control se ha convertido en uno de los retos más importantes de salud pública. Este estudio tiene como finalidad determinar su prevalencia, nuevos casos y control en el País Vaco, a partir de bases de datos administrativas.
Métodos: Se analizaron todos los registros de los ciudadanos del País Vasco con edad $\geq$35 años y se estableció un algoritmo para detectar la presencia de DM2 a partir de diagnósticos y prescripciones registrados. Se extrajo información relativa a un período de 4 años de variables demográficas, recomendaciones de las guías de práctica clínica, grado de control de la enfermedad de acuerdo con las guías locales y presencia de cardiopatía isquémica.
Resultados: En 2011, 134.421 personas tenían DM2, es decir, una prevalencia conocida del 9,12%. Hubo 8.896 casos nuevos. Los criterios principales de control (hemoglobina glicosilada (HbA_{1c}), colesterol LDL (LDLc) y presión arterial (PA)) se alcanzaron en el 23,15% de las personas con diagnóstico de cardiopatía isquémica y en el 24,54% de personas sin diagnóstico de cardiopatía isquémica.
Conclusiones: La prevalencia observada en el País Vasco es más baja que la observada en España, y el alcance de los objetivos para HbA_{1c}, PA y LDLc fue ligeramente mejor excepto en la PA que fueron similares. Los datos registrados en este estudio podrían dar lugar al desarrollo de estrategias para mejorar la atención clínica de los pacientes con DM2.

Introduction

From a clinical perspective, diabetes mellitus is a group of metabolic diseases characterised by chronic hyperglycemia secondary to an absolute or relative defect in insulin secretion and accompanied, to a greater or lesser extent, by lipid and protein metabolism disorders, leading to a number of chronic microvascular and macrovascular complications.

This chronic disease is now recognised as one of the most important health issues given its high prevalence and the impact on healthcare services and consequent economic impact.[1] According to recent Spanish studies based on a population survey, the prevalence in Spain of type 2 diabetes (T2DM) is estimated at 13.8% (95% CI, 12.8–14.7) in individuals aged $\geq$18 years (of which 6% (95% CI, 5.4–6.7) had unknown T2DM),[2] while the worldwide figure is 8.3%.[3] Although, glycaemic control and management of cardiovascular risk factors (CVRFs) can reduce the incidence of diabetic complications, several studies have indicated that only 7–12% of patients with diabetes achieve optimum control of all CVRFs.[4–6]

In order to address the problem posed by the scale of T2DM, changes have had to be made to the structure and organisation of healthcare services to ensure a more efficient use of available resources, such as the effective coordination of all levels of care, implementation of multidisciplinary teams, self-care education and collaboration with diabetes patients' associations.

In recent years, there has been consensus on the implementation of a multidisciplinary approach to the prevention of T2DM and the management of patients in primary care. Therefore, from 1993 until the present, the Spanish Group for the Study of Diabetes in Primary Healthcare (GEDAPS) has issued guidelines with the main recommendations for the diagnosis, management and treatment of diabetes. Additionally, the Spanish National Healthcare System (SNS) has developed strategic plans to address the disease,[7] and Osakidetza-Basque Health Service has