Risk assessment and coronary artery disease psychological testing in asymptomatic diabetes mellitus patients.

Patrick Henry*

Department of Cardiology, Inserm U942, Lariboisiere Hospital, Assistance Publique - Hôpitaux de Paris, University of Paris, Paris, France

Introduction

A chronic metabolic disorder called diabetes is characterised by high blood glucose levels, which over time cause major harm to the heart, blood vessels, eyes, kidneys, and nerves. People with diabetes experience cardiovascular (CV) events at a higher rate than those without. In addition to having a greater future mortality risk than persons without diabetes, a significant portion of diabetics do not survive their first CV episode. The risk of CV events has significantly decreased in people with diabetes over the past few decades, although it is still higher than in the overall population. Diabetes is related with a variety of CV risks.

Diabetes patients' primary prophylaxis cardiovascular risk

Different types of diabetes and the diagnostic criteria for diabetes and prediabetes are shown in Supplementary data, Tables S1 and S2, respectively [1]. CV risk is increased in both Type 1 Diabetes (T1D) and Type 2 Diabetes (T2D), although T1D has been less well studied, and the data in rare monogenic diabetes are scarce [2]. Data from a meta-analysis of 37 prospective cohort studies among more than 400,000 individuals reported an increased adjusted relative risk of coronary mortality of 1.99 in men with diabetes and 3.12 in women with diabetes. The relative risk is higher in T1D than in T2D, and in women compared to males for both T1D and T2D, for all CV outcomes. It is significant to emphasise that, like people with T2D, people with T1D also have age-related risk factors, such as insulin resistance.

Diabetes patients' specific cases of coronary artery disease

Diabetes patients have coronary artery disease that is more severe, more widespread, and more diffuse than people without the disease. According to Rochester's autopsy register, among patients over 65, the prevalence of high-grade and multivessel coronary lesions was comparable in patients with diabetes who did not have antemortem Coronary Artery Disease (CAD) and in patients who did not have diabetes but did have antemortem CAD [3]. Angiographic studies have shown that CAD in diabetes patients has a number of specificities, with more diffused lesions, more intermediate lesions, more calcification and pronounced damage on the distal coronary bed. A decrease in coronary collateral formation in response to chronic myocardial ischaemia has also been described Vascular calcification is likely driven by specific diabetes-associated mechanisms with vascular smooth muscle cells undergoing osteogenic transformation [4].

Malfunction of the endothelium and diminished coronary reserve

A common and early indicator of vascular disease in diabetes is endothelial dysfunction. Its pathogenesis is still complicated, with anomalies in vasodilatation, inflammation, and a pro-thrombotic state being its defining features. In addition to hyperglycemia, risk factors such as insulin resistance and hyperinsulinemia may potentially cause endothelial dysfunction by causing oxidative stress and lowering the bioavailability of nitric oxide. Following an improvement in glycaemic management, this impairment seems to be reversible. These findings taken together imply that endothelial dysfunction in patients without known atherosclerotic lesions should be taken into consideration as an early indicator of vascular disease [5].

Conclusion

In order to decide whether or not to undergo CAD screening, as well as to establish therapeutic objectives and the best courses of action, coronary risk stratification should be taken into consideration. However, more research is required to advance our understanding of the estimation and management of coronary risk in diabetics, and it is necessary to assess the cost-effectiveness of our approach.

References

1. Aronson D, Edelman ER. Coronary artery disease and diabetes mellitus. Cardiol Clin. 2014;32(3):439-55.
2. Turner RC, Millns H, Neil HA, et al. Risk factors for coronary artery disease in non-insulin dependent diabetes mellitus: United Kingdom Prospective Diabetes Study (UKPDS: 23). Bmj. 1998;316(7134):823-8.
3. Fishman SL, Sonmez H, Basman C, et al. The role of advanced glycation end-products in the development of coronary artery disease in patients with and without diabetes mellitus: a review. Mol Med. 2018;24(1):59.

***Corresponding author:** Patrick Henry, Department of Cardiology, Inserm U942, Lariboisiere Hospital, Assistance Publique - Hôpitaux de Paris, University of Paris, Paris, France, Email: patrick.henry@aphp.fr

***Received:** 30-Jun-2022, Manuscript No. AADY-22-71108; **Editor assigned:** 02-Jul-2022, PreQC No. AADY-22-71108(PQ); **Reviewed:** 15-Jul-2022, QC No AADY-22-71108; **Revised:** 19-Jul-2022, Manuscript No. AADY-22-71108(R); **Published:** 26-Jul-2022, DOI: 10.35841/aady-6.4.116*

***Citation:** Henry P. Risk assessment and coronary artery disease psychological testing in asymptomatic diabetes mellitus patients. J Diabetol. 2022;6(4):116*

4. Al-Nozha MM, Ismail HM, Al Nozha OM. Coronary artery disease and diabetes mellitus. J Taibah Univ Medical Sci. 2016;11(4):330-8.

5. Hofer MD, Meeks JJ, Mehdiratta N, et al. Lichen sclerosus in men is associated with elevated body mass index, diabetes mellitus, coronary artery disease and smoking. World J Urol. 2014;32(1):105-8.

Citation: *Henry P. Risk assessment and coronary artery disease psychological testing in asymptomatic diabetes mellitus patients. J Diabetol. 2022;6(4):116*