TRENDS IN CONTEMPORARY CARDIOVASCULAR RISK ASSESSMENT IN CANADA: RESULTS OF THE PARADIGM PERCEPTIONS STUDY

M. Gupta, 1,2,3 M. Tsigoulis, 1 M. Kajil, 1 S. Hirjikaka, 1 A. Quan, 3 H. Teoh 1,3 and S. Verma 1,3

1 Canadian Cardiovascular Research Network, Brampton, ON; 2 Division of Cardiology, McMaster University, Hamilton, ON; 3 Division of Cardiac Surgery, St Michael's Hospital, Toronto, ON

ABSTRACT

Objective: There are limited data in the contemporary era as to how primary care physicians (PCP) assess global cardiovascular risk and incorporate non-traditional risk factors in their decision making. Methods: We conducted a prospective cross-sectional survey of 652 Canadian PCP. Using a structured and validated tool, we evaluated their perceptions regarding risk assessment, lipid treatment thresholds, and novel biomarkers. Results: PCP indicated that they used the Framingham Risk Score (FRS) to estimate global risk in 67% of cases, yet 31% incorrectly identified a high-risk patient according to the FRS. Non-classical risk factors such as family history or central obesity were identified by 40% as the single most important determinant of initiating formal risk assessment. PCP reported that they reclassified patients into high-risk categories in the presence of metabolic syndrome or positive family history in 62% and 64% of cases respectively. Waist circumference (WC) was considered as a vital sign by 84%, yet only 6% reported routinely documenting this. Inflammation was identified as the main mechanism of atherosclerosis by 50% of PCP, and 100% were aware of hs-CRP as an additional risk marker. However, 51% were unclear about the clinical utility of this biomarker to risk stratify an intermediate risk patient beyond traditional risk factors, and 73% were unsure if elevated hs-CRP identified a patient population requiring statin treatment. CT angiography was identified by 24% as the best test for screening in primary prevention. Conclusions: PCP incorporate non-traditional measures, in addition to FRS, in risk stratification. Although central obesity was identified as an important factor promoting formal risk assessment, WC was documented by fewer than 6% of PCP. The majority of respondents were unclear about the clinical utility of hs-CRP in risk stratification or treatment. One quarter of PCP suggested that CTA was the best suited test for screening in primary prevention.

INTRODUCTION

Appropriate cardiovascular risk stratification is imperative for the optimal application of prevention therapies. Despite the availability of evidence-based guidelines for cardiovascular prevention, studies continually demonstrate a persisting care gap in clinical practice.

OBJECTIVE

To evaluate the current perceptions of primary care physicians regarding cardiovascular risk assessment and lipid treatment thresholds.

STUDY DESIGN

Participants: 2255 primary care physicians, from 10 Canadian provinces, were invited by mail between October 2008 and May 2009 to complete a validated 32-question survey aimed at determining their current practice of global cardiovascular risk assessment and the subsequent treatment algorithms employed.

Data Handling: Completed surveys were returned to the Canadian Cardiovascular Research Network where the entries were read with DataFax 3.9 software. The data were analyzed by two investigators (H.T. and A.Q.) who were blinded to the identities of the physicians.

RESULTS

The blue bar in each figure denotes the most correct answer (where applicable).

SUMMARY

95% of physicians were aware of the outcomes of FRS estimates but 29.5% could not characterize FRS thresholds for high risk.

Family history was considered by 23.7% of physicians to be the most important single risk factor but only 44.4% correctly used a positive family history to roughly double the FRS, as per the Canadian Lipid Guidelines.

79.2% of physicians considered waist circumference as a vital sign but only 5.1% routinely documented this measurement.

44.9% and 13.4% of physicians respectively equated metabolic syndrome with high and intermediate risk. Only 24% of physicians considered carotid ultrasound the best imaging technique for screening in primary prevention.

CONCLUSIONS

Despite the wide dissemination of lipid guidelines, significant knowledge gaps persist regarding optimal risk stratification for CV risk assessment.

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