

Prevalence of Risk Factors and Occult Coronary Disease in South Asians Referred to a Specialized Risk Assessment Clinic

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BACKGROUND

- Traditional risk assessment may underestimate coronary heart disease (CHD) risk in South Asians (SA), a population at high risk for premature CHD.
- A specialized risk assessment clinic was established to appropriately risk stratify SA with CHD risk factors.
- The goal was to facilitate screening and detection of risk factors, and implementation of evidence-based risk reduction strategies in SA without prior CHD.

METHODS

- Between June 2010 and April 2012, 483 subjects were referred to the SA Risk Assessment Clinic in Brampton, ON.
- Inclusion criteria for referral included SA ethnicity, men >30y or women >40y, absence of known CHD or cardiac symptoms, and presence of one or more CHD risk factors.
- Patients were evaluated in their language of choice by specialists expert in ethnic-specific risk assessment using validated tools (Framingham (FRS) and ETHRISK scores).

SA CLINIC OBJECTIVES

Primary objectives

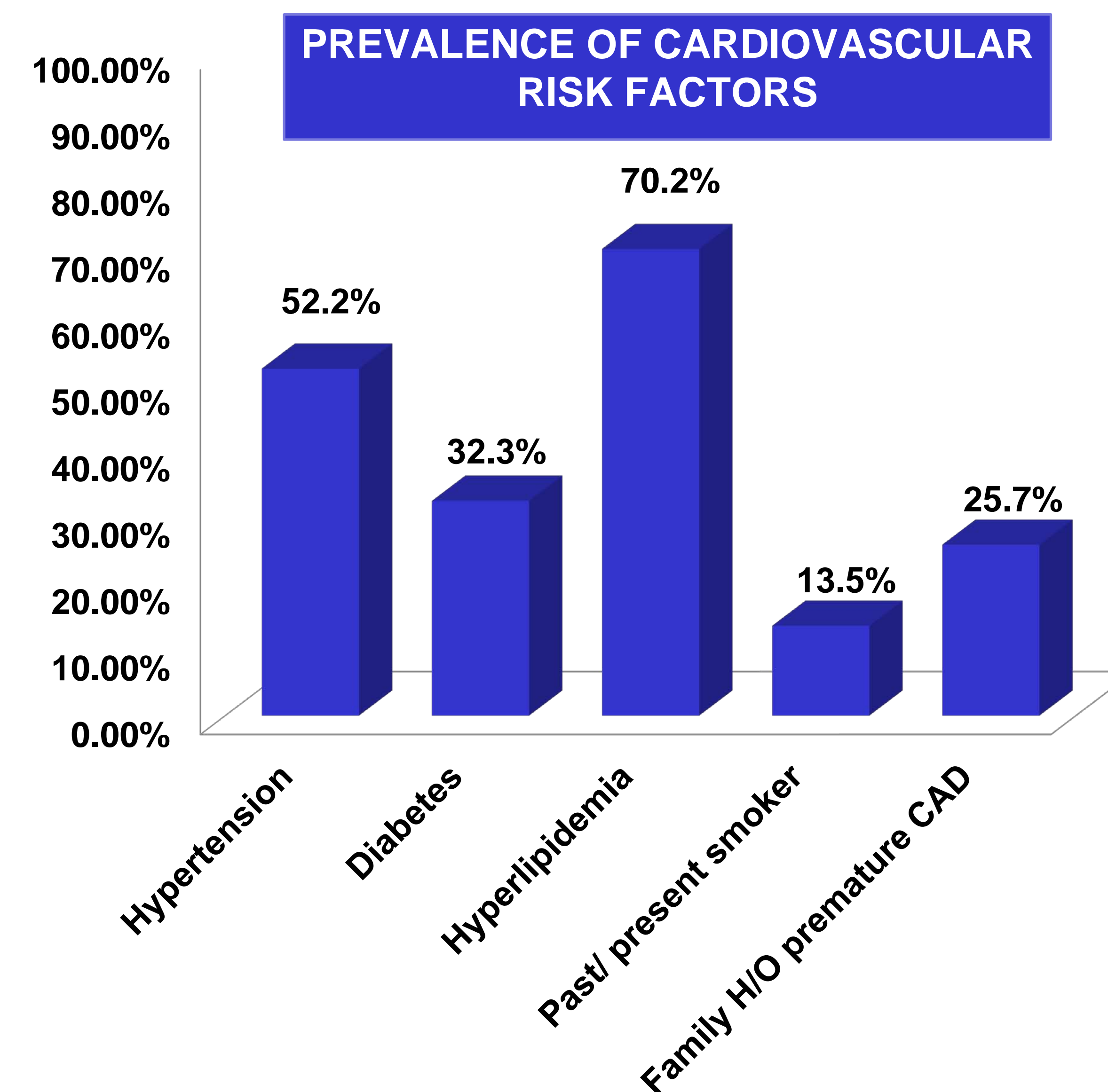
- To provide cardiovascular screening of individuals of SA descent in an effort to promote earlier risk factor modification, lifestyle interventions, and pharmacotherapy if appropriate.
- To reduce the burden of South Asian diabetes and cardiovascular disease in Canada by earlier screening and detection of risk factors, and implementing evidence based risk reduction strategies.

Secondary objectives

- To evaluate the prevalence of CHD risk factors and its correlation to biochemical risk markers and Framingham Risk Score (FRS).
- To disseminate best practices and the key concept of cardiovascular disease.

RESULTS

- The mean age was 55.3y (+/- 12.0), and 68.7% were male.
- Subjects had been living in Canada on average for 18 years.
- One third (32.3%) were vegetarian, 65.8% exercised fewer than 4 days/week, and 66% considered themselves overweight.



- At baseline assessment, LDL-cholesterol was at target in 100% of low risk patients (by Framingham Risk Score), 62.9% of intermediate risk and 50.5% of high risk patients, as per the 2009 CCS Lipid Guidelines.
- Lipid lowering therapy was being used in 57.6% (n=278) of patients and 49.5% (n=239) of patients were receiving antihypertensive therapy prior to clinic referral.
- Hypertension (HT) control in patients with diabetes was poor (30.8%), whereas HT control in patients without DM was better (67.7%).

RESULTS

Cardiovascular Risk Factors

	(n= 483)
Male	68.7%
BMI >25	353 (73.1%)
BMI 23-25	80 (16.6%)
BMI <23	50 (10.3%)
LDL mmol/L (SD)	2.5 (0.97)
hs-CRP mg/L (SD)	2.8 (3.7)
Abdominal obesity (M>90 cm/ F>80 cm)	430 (89.0%)
Metabolic Syndrome	310 (64.2%)

Framingham Risk Score By Gender

	Men (n= 332)	Women (n= 151)
Age (SD)	53.4y (12.1)	59.4y (10.9)
FRS- High	152 (45.8%)	60 (39.7%)
FRS- Moderate	62 (18.7%)	27 (17.9%)
FRS- Low	118 (35.5%)	64 (42.4%)

RESULTS

- Based upon abnormal non-invasive test results or elicited symptoms, coronary angiography was performed in 50 patients, of whom 70% (35) were found to have CHD.
- At baseline assessment, 37.5% of the patients proven to have CHD had a low or intermediate FRS.

CONCLUSION AND IMPLICATIONS

- South Asians referred to a specialized clinic for primary prevention of CHD have a high prevalence of abdominal obesity, hypertension, hyperlipidemia, diabetes and metabolic syndrome, and tend to be sedentary.
- Overall, 43.9% of these subjects had a high FRS.
- Suboptimal control was observed for hypertension, particularly in patients with diabetes, and for LDL-c in the higher FRS groups.
- Underlying CHD was identified in 7.2% of subjects, including those with low or intermediate FRS
- Reliance on FRS alone may significantly underestimate true CHD risk in the South Asian population.

ACKNOWLEDGEMENTS

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