Comment. Most packaged food products do not include potassium content on the NFP. One might expect items with high levels of potassium to more often be labeled; however, categories where potassium information was most available had a wide range of potassium content, while some categories with expected high levels of potassium, such as canned whole tomatoes and canned beans, had low potassium information availability. The lack of potassium information on the NFP presents a problem for patients and consumers trying to make informed decisions when purchasing foods, particularly those motivated to minimize their risk of cardiovascular disease and those for whom potassium intake must be restricted. Lack of potassium information is also a problem for researchers and policy makers interested in understanding the overall and potassium-specific nutritional content of the packaged food supply.8

The New York City Department of Health and Mental Hygiene, along with 35 health authorities and health organizations, has called for a publicly accessible, product-specific nutrition database of packaged food products.9 The creation of such a database would allow for analyzing nutritional trends, which would inform recommendations to improve nutritional intake. While such a database is valuable with existing NFP information, its public health value would be enhanced if potassium information was consistently available.

A limitation of this study is that the NSRI database was originally created to assess changes in sodium concentration; therefore, it includes a wide range of products, but only in food categories with significant potential for sodium reduction (eg, some desserts and beverages are not included). Also, only the top 80% of products sold within each category are represented in the analyses.

The FDA is planning to revise the NFP, and potential improvements to its content and format are under consideration.10 The addition of potassium content and percent daily value to required NFP information could remedy the described deficit in publicly available nutrition information. Providing this important information to consumers, patients, and researchers would allow a more detailed understanding of the food supply, which would complement existing strategies to improve population nutritional intake.

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Reconstructing Angina: Cardiac Symptoms Are the Same in Women and Men

Coronary artery disease (CAD) is the leading cause of mortality in the Western world. The prevalence of angina and proportion of deaths from CAD is higher among women than men.1,2 Despite this, the perception that CAD is a man’s disease prevails.3-5 Historic faulty assumptions in the construct of angina, failure to systematically include women in clinical studies, and differences in age-specific incidence rates have perpetuated this perception.5,6 As a result, the term typical angina has evolved...
to describe symptoms in men, whereas atypical angina is applied to women. This lack of clarity has been a source of controversy in understanding CAD in women.

We developed a new theory and construct of angina by scaling symptom expression according to sex and gender along a continuum. The objective of this study was to quantify male-typical vs female-typical angina symptoms as they range along a continuum among patients with obstructive CAD.

Methods. We studied patients with suspected CAD and/or angina and at least 1 prior abnormal cardiac test result who underwent their first coronary angiogram. A previously developed validated standardized cardiac assessment tool captured patient risk factors and symptoms. An experienced angiographer blinded to patient identifiers interpreted the angiographic findings. Obstructive CAD was defined as the presence of at least 1 vessel 2.0 mm or larger in diameter with at least 70% stenosis.

Baseline characteristics including age, cardiac risk factors, and coronary anatomy were compared between women and men. Symptoms were analyzed according to sex/gender and obstructive CAD angiographic results. Continuous and dichotomous variables were compared using 2-tailed t tests and χ² tests, respectively (IBM SPSS19, IBM). A predetermined sample size of 210 was estimated to provide 80% power at P < .05 (2-sided).

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Results. From June through November 2010, 128 men and 109 women were enrolled. Traditional risk factors were present in 118 participants (50% of the sample). Women were slightly older (mean [SD] age, 67.5 [10.8] vs 64.5 [11.5] years; P = .06), more likely to have normal coronary arteries (22 of 109 [20%] vs 10 of 128 [8%]; P = .004), and less likely to have obstructive CAD (50 of 109 [46%] vs 89 of 128 [70%]; P < .001) when compared with men. Men were more likely to be past smokers (77 of 128 [60%] vs 45 of 109 [41%]; P < .001).

We mapped reported symptoms onto a continuum according to sex and gender (Figure). The most common descriptors used by men and women with obstructive CAD included “chest pain” (71 of 87 [82%] vs 42 of 50 [84%]; P = .72), “pressure” (47 of 87 [54%] vs 29 of 50 [58%]; P = .65), and “tightness” (37 of 87 [43%] vs 29 of 50 [58%]; P = .08), respectively. Women used certain descriptions approximately twice as often as men, including “discomfort” (23 of 50 [46%] vs 24 of 87 [28%]; P = .03), “crushing” (12 of 50 [24%] vs 8 of 87 [9%]; P = .02), “pressing” (14 of 50 [28%] vs 12 of 87 [14%]; P = .04), and “bad ache” (15 of 50 [30%] vs 13 of 87 [15%]; P = .04).

Men and women reported pain in the same areas outside the chest region, including the arms (37 of 87 [43%] vs 25 of 50 [50%]; P = .40), back (23 of 87 [26%] vs 15 of 50 [30%]; P = .65), and shoulders (28 of 87 [32%] vs 13 of 50 [26%]; P = .45), respectively.

Other symptoms reported by men and women included shortness of breath (58 of 87 [67%] vs 38 of 50 [76%]; P = .25), fatigue (49 of 87 [56%] vs 31 of 50 [62%]; P = .52), sweating (42 of 87 [48%] vs 23 of 50 [46%]; P = .40), and weakness (28 of 87 [32%] vs 23 of 50 [46%]; P = .11), respectively. Women were more likely to report dry mouth (17 of 50 [34%] vs 16 of 87 [18%]; P = .04), whereas men did not report any symptoms significantly more often than women.

Comment. By mapping reported symptoms along a continuum, we have shown that angina-type symptoms are remarkably similar among men and women with obstructive CAD. This suggests that the clinical construct of “atypical angina” in women is incorrect. Furthermore, the descriptors more commonly expressed by women were not unique to women; men expressed them also. The choice of terms used to describe a symptom may be a function of gendered language rather than of conventionally portrayed biological sex difference. In contrast, among the seemingly biological symptoms, such as non–chest localization of pain, we observed no differences between men and women. The continuum thus allows for the gendered expression of a symptom while not constraining the symptom to a particular sex.

Previous studies have focused on establishing differences in symptoms between men and women, between typical and atypical angina. Our data show the predominance of similar symptoms between men and women. By presenting these terms on a continuum, our study demonstrates the commonalities in cardiac symptomatology for men and women, while also allowing for gendered differences in how these experiences may
be expressed, providing more meaningful diagnostic information than conventional “typical” vs “atypical” distinctions.

Our study is internally valid because symptoms were validated against the gold standard, coronary angiography. Our modest sample size is sufficiently powered; in addition, our study represents “real-world” practice and is one of the few prospective studies of cardiac symptoms to date.

In conclusion, the symptom continuum according to sex and gender has empirically demonstrated the substantial overlap of shared symptoms between men and women with obstructive CAD. This information can help clinicians to better contextualize symptoms associated with obstructive CAD rather than adhering to the conventional “typical” and “atypical” angina distinction. Future studies should seek to test and validate the symptom continuum according to gender in diverse patient populations.

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EDITOR’S NOTE

Debunking Atypical Chest Pain in Women

Awareness campaigns for heart disease in women have led to increased recognition for women of the importance of preventing heart disease via healthy lifestyle choices and recognizing the symptoms of heart disease. There also has been focus on the idea that women somehow present differently than men with ischemic coronary artery disease (CAD). Kreatsoulas et al reassure us that women and men are more alike than we think in presentation of CAD, and both are most likely to experience chest pain, pressure, and tightness. It is likely that atypical symptoms represent women who do not have ischemic CAD. These findings should be a great relief to the many women who have been concerned that they could be having a myocardial infarction unbeknownst to them because they would not get the typical warning symptoms of chest pain.

Rita F. Redberg, MD, MSc

COMMENTS AND OPINIONS

Resumption of Warfarin Therapy After Gastrointestinal Tract Bleeding: Benefit or Bias?

It is with great interest that we read the article by Witt and colleagues, who examined the risk of thromboembolism, recurrent hemorrhage, and death in a retrospective cohort of warfarin users with gastrointestinal tract bleeding. Although no difference was observed in recurrent hemorrhage, the authors found that warfarin therapy resumption after gastrointestinal tract