Assessing Chest Pain: Results from Five Kenyan Communities in the Kenya Heart and Sole Afya Njema Project

Statement of the problem: Although not always indicative of myocardial ischemia, chest pain (CP) is a key warning symptom of a possible heart attack and its early detection and treatment has a bearing on CVD prognosis. This study aims to characterize chest pain in 5 Kenyan communities where high prevalence of CV risk factors (CVRF) has been observed.

Background: The prevalence of cardiovascular disease (CVD) in Sub-Saharan Africa is increasing however estimates of ischemic CP are not well known. In previous work we observed high prevalence of CVRF including hypertension, diabetes and obesity in community dwelling Kenyans. We also had anecdotal reports of CP, but did not have an adequate description of this symptom.

Methods used in the investigation: A convenience sample of consecutive patients at 5 Kenyan clinics was screened for CVRF by trained US/Kenyan teams using validated protocols. Three questions relating to CP (prevalence, exacerbation, relief) were drawn from the WHO World Health Survey. Data were abstracted and imported into Stata© for analysis. US/Kenyan IRB approval was obtained.

Summary/ Results of investigation: 801 individuals (mean age 54 [±17.5], 77% female, 98% black) were screened and found to have high rates of hypertension (55.6%), diabetes (9.2%), and BMI ≥ 25 (53.8%). The majority (61.4%) had 2+ CVRF. Of those who reported chest pain (n=245), 43.6% (n=92) also reported that the pain occurred with activity and resolved with rest; a symptom cluster suggestive of ischemic CP. Overall, 15% of those who answered the CP question (n=614) had the symptom cluster suggestive of ischemic CP however only 3.6% of the sample reported a history of CVD.

Conclusions of the investigation/ Interpretation of results: These data suggest that ischemic CP may be occurring in community dwelling Kenyans however few have been diagnosed with CVD. This has implications for practice and policy, particularly since it occurs in the setting of multiple CVRF. These are field level data and need to be interpreted with caution because translation and the cultural context of CP may influence CP description. Additional studies are needed to fully characterize/assess CP.

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