Reviewer's report

Title: Echocardiographic Partition Values and Prevalence of Left Ventricular Hypertrophy in Hypertensive Nigerians.

Version: 1 Date: 2 July 2006

Reviewer: Vuyisile V Nkomo

Reviewer's report:

General
Adebiyi et al undertook an echocardiographic study to look at echocardiographic partition values and how they affect prevalence of left ventricular hypertrophy in hypertensive adult Nigerians. 480 subjects were enrolled, and of those 457 (95.2%) had complete data (235 men and 222 women). Hypertensive adults, both treated and untreated, were included in the study and those with valvular heart diseases, heart failure, ischemic heart disease, diabetes, sickle cell disease, and renal failure were excluded. Eight different criteria for LVH (4 indexing LV mass to BSA, 2 indexing LV mass to height, and 2 indexing LV mass to height raised to the power of 2.7) were applied to the study subjects to determine the prevalence of LVH according to each criteria. The prevalence of LVH varied significantly depending on the criteria used from 30.9% to 56%.

This is an important study for the reasons mentioned by the authors including that LVH is a major independent determinant of subsequent cardiovascular morbidity and mortality. Knowledge, therefore, of whether LVH or increased LV mass are present is critical to management decision making and offering of therapies that improve outcomes.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

It is difficult for me to imagine there will ever be an international standard for defining echocardiographic LVH as proposed by the authors in the conclusion of the abstract (page 3). In fact, this need for an international standard for defining echocardiographic LVH is not revisited in the text or conclusion of the manuscript.

Eccentric hypertrophy is defined two different ways and concentric hypertrophy is not defined (page 7).

The authors state Table 2 shows "The echocardiographic LV parameters were generally higher in men than in women except for the indexes of LV systolic function, which were higher in women." However, Table 2 shows men had statistically higher fractional shortening (34.4 vs 32.7, p 0.032) and higher ejection fraction (70.3 vs 68.4, p 0.059) than women (page 8). Please explain.

The mean ages for men and women listed on page 8 do not match the ones on Table 1.

Table 3 is not included.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Use full term before abbreviation, eaxample LVH and LVM in the abstract (page 3) and LVM in the introduction (page 4).

" ...of the American Society of Echocardiography" (page 6)

What are (i) (ii) (iii) (iv) in Table 4?

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Discretionary Revisions (which the author can choose to ignore)

Use "more common" instead of "commoner"

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major
compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No