Reviewer's report

**Title:** Relationship between Tei Index and left ventricular geometric patterns in a hypertensive population: a cross-sectional study.

**Version:** 1  **Date:** 4 July 2011

**Reviewer:** Rosa Sicari

**Reviewer's report:**

In the present manuscript author addresses the relationship between Tei Index and left geometric patterns in a hypertensive population in a single center cross-sectional study. There are several limitations that authors should address as regards, to methodology, data analysis and conclusions.

The echo measurement of LVH has several limitations and should be acknowledged. LV mass indexed is the parameter to be measured, still the quantification is highly variable. Please provide inter and intra-observer variability for the laboratory.

The Teicholz’s method for the assessment of ejection fraction is not recommended due to the its inability to provide an accurate measurement, especially in dysfunctioning ventricles. Please address. It is recommended to use the Simpson’s rule that may overcome geometric alterations and it is not dependent on M-mode alignment.

The Tei Index has never really entered the clinical practice, and it is mostly used for RV assessment (see ASE Guidelines). Please address. However, there are several studies, addressing the role of tissue Doppler in hypertensive patients. Please discuss.

In line with the previous comment, the reference list is quite limited, highlighting the novelty of the present report which contradicts a large body of evidence has already demonstrated the impairment of longitudinal function in hypertensive patients. The present results may be largely due to the methodology used which is inappropriate.

A recent study, very similar, to the present one coming from Nigeria has been published on the Cardiovascular Journal of Africa (Akitunde et al. 2011; Vol: 22 (3), with the same design but with different results. Author should cite and discuss the present results performed on a very similar population.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
'I declare that I have no competing interests'