Reviewer's report

Title: Heart failure diagnosis in primary health care: clinical characteristics of problematic patients. A clinical judgement analysis study.

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Reviewer: Federico Vancheri

Level of interest: A paper of considerable general medical or scientific interest

Advice on publication: Unable to decide on acceptance or rejection until the authors have responded to the compulsory revisions

Discretionary revision

BACKGROUND
Few words about the usefulness of measuring the plasma concentration of brain natriuretic peptide for diagnosing left ventricular failure should be added.


Compulsory revision

METHODS
Pag 6, line 16
Since a low value had been associated with heart failure. It should be specified "in our group of patients" as low blood pressure is not a diagnostic characteristic of heart failure

RESULTS
Pag 7, line 15
Twenty-six of the cases had heart failure. There is no indication about the diagnoses of the non heart failure patients. It is important to know which kind of patients could be misdiagnosed as heart failure.

Table 1
Heart failure and non heart failure patients differed only regarding cardiac volume, atrial fibrillation and ejection fraction (not shown to the participants). Which are the differences for the other six variables? This is crucial in order to study the discriminant power of the variables. If a clinical sign is equally frequent in both groups, probably it does not influence the diagnosis. Conversely, if a variable is mainly represented in one group, it has high discriminant power.

Table 1
One patient in the non heart failure group had the combination of dyspnoea + leg edema + rales. As
the diagnoses were based on echocardiography and, presumably, ejection fraction was not reduced, this patient could have "diastolic heart failure", to be considered in the other group.

**DISCUSSION**

**Pag 9, line 5**

We found that "classic" clinical findings like dyspnoea, oedema and rales seemed to be less helpful than cardiac enlargement and atrial fibrillation. This conclusion is not clearly supported by data. In most patients the clinical sign dyspnoea is considered in combination with cardiac enlargement and with atrial fibrillation. Therefore, its relative contribution to the diagnosis cannot be assessed. In few patients (2 heart failure and 1 non heart failure) dyspnoea, leg edema and rales are combined but the number of subjects in the two groups is so small that such clinical variables cannot discriminate about the presence of heart failure.

In my opinion, these limitations preclude the possibility to conclude that "classic" clinical findings are less helpful than cardiac enlargement and atrial fibrillation.

**Competing interests:**

None declared.