Reviewer's report

Title: Utility of NT-proBNP as a rule-out test for left ventricular dysfunction in very old people with limiting dyspnoea: the Newcastle 85+ Study

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Reviewer: Luis Manzano

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Collerton et al deal with the utility NT-proBNP as a rule-out test for left ventricular dysfunction (LVD) in very old people with limiting dyspnoea. The authors conclude that the value of NT-proBNP is limited in this situation and does not avoid echocardiography evaluation to clarify the diagnosis.

Taking into account the difficulty in the recruitment and evaluation of very elderly patients, this is a meritorious study indeed. However, in my opinion, there are serious questions that should be commented.

I do not exactly how these findings are applied into clinical practice. Patients were selected according to the presence of limiting dyspnoea, independently of any other semiology. Can we consider this as a good way to select patients in order to evaluate the utility of natriuretic peptides? The gold standard is really LVD diagnosed by echo, not heart failure (HF). So what important is limiting dyspnoea in the selection of elderly patients.

In my opinion, authors should have evaluated previous history and HF semiology more systematically to select patients with HF. The study is really focused in the value of peptides in detecting LVD, not in helping physicians to rule out HF in elderly patients. Sample to this outcome (LVD) is very small, particularly to detect diastolic dysfunction, which is very frequent in elderly patients, independently of clinical manifestations.

On the other hand, I think the echocardiographic criteria to diagnosis severe diastolic dysfunction are questionable (E/e' > 10 ?)

In summary, I think it is a valuable study but without a clear application in the clinical practice.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

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