Reviewer’s report

Title: Early diagnostic impression has good predictive ability in primary care patients with chest pain

Version: 2 Date: 18 August 2009

Reviewer: Rudi Bruyninckx

Reviewer’s report:

Review BMC Family Practice
18.08.09

Manuscript: Early diagnostic impression has good predictive ability in primary care patients with chest pain.
Reviewer: Rudi Bruyninckx

Thank you for this interesting paper. It is a short report, what readers appreciate, but too short to understand the report. I had to read the paper several times before I understood it.

Please find below my comments, the major compulsory revisions are marked as ‘MCR’.
The other remarks are discretionary or minor essential revisions.

Introduction:
1) ‘In a study assessing the occurrence of thoracic pain in primary care, we examined if …
could validly predict the definite diagnosis retained one year after.’
What were the results of the study? Probably it was ‘...the positive predictive value of the early diagnosis impression was of 51% (95%CI: 49.4-52.5)’ (Abstract, measurements and main results).
If my interpretation is correct, you have to repeat this here and not only in the abstract.
2) ‘Furthermore, we examined if this predictive ability….age and gender’.
This is what you did, but this is not a research question. It must be clear what you want to do in this new (part) of the study.
Please define a research question. MCR

Methods
3) ‘Among 24,620 consecutive…five weeks in 2001’
These are results and belong to the result section.
4) ‘within 59 different general practices’
How were these practices selected?

5) ‘GPs recorded their initial diagnostic impression,’
   a) Is this ‘diagnostic impression’ the same as ‘the initial, early diagnostic impression that includes initial contact, the first words of complaints, and patient’s presentation’ (Introduction)
      If so, you have to give this definition in this method section and skip it in the introduction.
   b) Which diagnostic impressions were possible?
      You mentioned them at the result section, so you have to mention them here too.
   c) How did you make a difference between: ‘chest wall syndrome’, ‘anxiety disorder’ and ‘somatisation’? Maybe this is something for the discussion?

6) ‘the expressed patient’s anxiety within the first two minutes’
Could you give some more information on how the GPs have to examine this?
Were there rules or was it just the GP’s impression?

7) ‘The precise diagnosis’
Probably the same disease categories are used as for the ‘initial diagnostic impression’
I suggest to mention that.

8) ‘if any’
Please add which ‘definite diagnosis’ was used when there was no further information during the follow-up. This is also a point for the discussion section because the initial and the final diagnosis is made by the same GP.

9) ‘Predictive values of first glance impression’
I am not sure that you may use ‘predictive value’ here. For me they both exist i.e. a positive and a negative predictive value, being the results of the prevalence of a disease (like anxiety disorder)
   and the accuracy (sensitivity and specificity) of a test (here: first glance impression) using Bayes theorem. So I prefer ‘predictive ability’ over ‘predictive value’.
   I think you did so: a GP made 100 initial diagnoses of anxiety disorder and after one year the precise diagnosis of those 100 patients was confirmed in 45 patients, and so on for all disease categories. But also possible: a GP made 100 final diagnoses of anxiety disorder and then compared these with the initial diagnosis.
   After all, how you get the result is not clear for me and I need more information.
   MCR.

10) ‘..mean value with 95% CI’
You mentioned only once this interval in the result section.
Add the 95% CI when useful. MCR

11) ‘significance level was set at p<0.05’
You announce this here but it is not used in the text, so don’t mention it at all.

Results

12) ‘In patients lost during the follow-up at one year, the 3-month diagnosis was used.’
This is no result, this is for the method section.
13) ‘..patients with missing data were excluded.’
This is no result, this is for the method section.
14) ‘..and most physicians were men.’
If you have information on the localisation of the practices (urban, rural) add it.
Suggestion: make a table with the GP’s characteristics.
15) ‘..were seen with chest pain (51.4%) and 51.9% of patients were over 50 years.’
Add the 95% CI or make a table with patient characteristics and the 95% CI. MCR
16) ‘..chest wall syndrome for 266 patients (42.5%), coronary…for 62 patients (9.9%)’
Add the 95% CI or make a table with patient diagnoses and the 95% CI. MCR
17) ‘An initial diagnostic impression was recorded in 441 patients (70.4%) and confirmed in 319 patients at one year.’
I do not understand this: you had full data of 626 patients and now only 319. You have to explain this. MCR
18) ..showed little heterogeneity between GPs.
Was there a difference between the older and the young GPs (less than 2 year of experience)?

Discussion

19) I prefer a structured discussion: summary, strengths and weaknesses, previous studies, future research.
20) ‘We consider that thoracic pain in primary practice is…life-treating condition.’
Suggestion: better in the introduction.
21) ‘Furthermore, at first glance, GPs were also able to detect two thirds of life treating diagnoses.’
Is this a good result? Yes and No. If you are recognised immediately it is good, if not it is bad.
What is the importance of the first glance diagnosis? What is the importance of history taking and the physical examination to make a better diagnosis.
Please discuss MCR

22) ‘Thus, the initial diagnostic impression may be obtained by means of non-explicit pathways, based on intuition, associations with stored information and pattern recognition.

True, but we also got a lot of information at the first glance: is it at the GP’s office, is it an urgent home visit, the age of the patient, gender, is patient lying in bed or on the ground, or normal walking, is he pale, is he anxious, are the relatives anxious, ..

If it is only stored information and pattern recognition, younger colleagues must have worse results. Is this so?

23) ‘To our knowledge, this is the first cohort study to examine the performance of the first diagnostic impression.’

Our group in Leuven, Belgium also worked on chest pain. Of course it is not exactly at the first glance diagnosis, but we suggest to read them. Please also read Abu Hani and my qualitative study of patients with chest pain. My colleague, Ann Van den Bruel made a similar study on the diagnosis of serious infections in children. Please check also the reference lists of the articles.


Table 1

24) ‘SE’

Please replace this by the 95%CI. MCR

Abstract

25) ‘...life treating affection (65.4%) and in patients who did not feel anxious (62.9%)’
Please add the 95%CI. MCR

26) ‘GPs were able to rule out a majority of life treating diagnoses at first glance…’

You can certainly rule in a lot of life-treating diagnoses, but how much diagnoses are we going to miss by ruling out on the basis of the first glance? So I am not convinced you can state this.

You have to discuss this in the discussion section, perhaps together with remark 21. MCR

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests