Reviewer's report

Title: The EPIYA-ABCC motif pattern in CagA of Helicobacter pylori is associated with peptic ulcer and gastric cancer in Mexican population

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Reviewer: Robert Raffaniello

Reviewer's report:

This study examines the relationship between H pylori and GI disorders in Mexican patients with gastric pathologies. The prevalence of the CagA gene and the EPIYA motif patterns of this virulence factor are also examined. The sample size is adequate and the paper is well written. The results are presented well and discussed intelligently. The findings are interesting and important. However, I have a couple of issues regarding the study:

Major issues:
I am not sure why the authors chose to determine CagA types (ABC, ABCC, etc) by PCR as opposed to sequencing the C-terminal of all 214 CagA+ samples. This may actually be less expensive than all the PCR rxas involved. Instead, only 20 random samples were sequenced. With the complete sequence data, there would be little ambiguity regarding the EPIYA arrangements, CRIPA sequences and EPIYA-B polymorphisms. A more detailed and meaningful analysis would be obtained.

My other question involves the histology samples. As mentioned in methods, samples were taken for histology, but the results are not presented. If the samples were examined for precancerous changes (atrophy, metaplasia), inflammatory intensity, anaplasia, etc., this data could be related to Hp infection and the presence of CagA. Do the authors intend to present this as a separate study?

Minor issues (suggestions):
Line 280 It may be better to say “on the other hand.” (not by other hand)
Lines 306-308 should be reworded to be more clear.
Line 320 ‘de cases’??
Line 350 change ‘likely’ to ‘possible’.
Figure 1 X-axis of top two graphs should be % H pylori positive % CagA positive.
Figure 2 It is not clear what primers were used in these experiments. It is not stated in legend.

Level of interest: An article of outstanding merit and interest in its field
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'