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ESPS Peer-review Report

Name of Journal: World Journal of Gastroenterology

ESPS Manuscript NO: 10064

Title: Accuracy of Urea Breath Test in Helicobacter Pylori Infection: A Systematic Review and Meta-analysis

Reviewer code: 00058381

Science editor: Qi, Yuan

Date sent for review: 2014-03-11 13:36

Date reviewed: 2014-03-12 18:58

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input checked="" type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

COMMENTS TO AUTHORS

COMMENTS TO THE AUTHORS
MAJOR COMMENT This manuscript presents a meta-analysis of 23 studies on the accuracy of urea breath test in Helicobacter pylori infection. Its main drawback is the heterogeneity of the included studies; this, however, is not the fault of the authors of the meta-analysis.

MINOR COMMENTS

Introduction, fourth paragraph: What is meant by “dose of radian”?

Author’s response: The the dose of radiation is the dose of 14C-urea breath test with the mini dose equals to 1 microCi (37 kbq) which has a high diagnostic accuracy (sensitivity 98%, specificity 97%) (Raju GS *et. al.* Mini-dose (1-(mu)Ci) 14C-urea breath test for the detection of Helicobacter pylori. Am J Gastroenterol. 1994;89:1027–31).

Off note, all included studies in our systematic review used at least the mini dose (1 microCi) when they used C14 urea breath test; some studies used double or 3-5 times the mini dose.

Figure 1: Thirty articles were excluded in the last step, but the sum of the corresponding subgroups (2+2+3+7+14) is 28.

Author’s response: The figure was reviewed and numbers were modified accordingly.



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Some linguistic/stylistic problems.

Author's response: The manuscript was reviewed and some modifications were done.



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Name of Journal: World Journal of Gastroenterology

ESPS Manuscript NO: 10064

Title: Accuracy of Urea Breath Test in Helicobacter Pylori Infection: A Systematic Review and Meta-analysis

Reviewer code: 00053562

Science editor: Qi, Yuan

Date sent for review: 2014-03-11 13:36

Date reviewed:2014-03-13 14:44

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

COMMENTS TO AUTHORS

Authors state that ubt can be preferred in many clinical settings. Is it true? Which one of them? A brief more focused comment on serology, histopathology and stool antigen tests with polymerase chain reaction (PCR) for detection of H. pylori?costs? Reliability? Add, please, some comment and personal points of view or experience.

Author’s response: The following paragraph was added to the introduction, 4th paragraph:

“Urea breath tests can play a useful role in the diagnostic evaluation of dyspeptic patients who have comorbidities that increase their risk of upper endoscopy, are intolerant to upper endoscopy, or have known or suspected gastric atrophy. Stool antigen testing can also be used to non-invasively detect active H. pylori infection, and the choice of diagnostic modality depends on factors such as cost, laboratory infrastructure, and concomitant use of medications such as proton pump inhibitors or antibiotics that may influence test results. Serum antibody test results can vary by geographic region, and may stay positive for a prolonged period following H. pylori eradication, thereby limiting the clinical utility for determining the presence or absence of current infection (Reference: Chey WD, Wong BC; Practice Parameters Committee of the American College of Gastroenterology. American College of Gastroenterology guideline on the management of Helicobacter pylori infection. Am J Gastroenterol. 2007 Aug;102(8):1808-25.)”



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ESPS Peer-review Report

Name of Journal: World Journal of Gastroenterology

ESPS Manuscript NO: 10064

Title: Accuracy of Urea Breath Test in Helicobacter Pylori Infection: A Systematic Review and Meta-analysis

Reviewer code: 00055108

Science editor: Qi, Yuan

Date sent for review: 2014-03-11 13:36

Date reviewed: 2014-03-16 20:36

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

COMMENTS TO AUTHORS

Comments to the authors, in general: This systematic review has been well performed; with a well expressed objective (see comment 1), precise criteria for the studies included and the relevant studies which have been selected for further evaluation. The quality of each included study has been properly evaluated. It seems reasonable to perform a metanalysis and pool the results. The study strength/limitations have been elucidated and of course there is a problem regarding heterogeneity in the included studies.

Author's response: Explanation of heterogeneity was added that it may be due to clinical or methodological variation; the performed subgroup analyses could not explain the difference

Comparing UBT to other tests for HP-infection - UBT almost always would come out positive compared to other tests - UBT is more or less the gold standard method. From a clinical point of view one could emphasis the UBT is not the test being used as the first test neither in diagnostic nor in post-treatment evaluation of a HP infected patient. There are several more available, easily performed and cheaper tests to choose. One should maybe also include that in the conclusion

Author's response: The following paragraph was added to the introduction, 4th paragraph:

“Urea breath tests can play a useful role in the diagnostic evaluation of dyspeptic patients who have comorbidities that increase their risk of upper endoscopy, are intolerant to upper endoscopy, or have known or suspected gastric atrophy. Stool antigen testing can also be used to non-invasively detect

active *H. pylori* infection, and the choice of diagnostic modality depends on factors such as cost, laboratory infrastructure, and concomitant use of medications such as proton pump inhibitors or antibiotics that may influence test results. Serum antibody test results can vary by geographic region, and may stay positive for a prolonged period following *H. pylori* eradication, thereby limiting the clinical utility for determining the presence or absence of current infection.”

A few specific comments:

1. Your objective is clearer in the abstract compared to the last paragraph in the introduction. Keep that and rephrase what’s written in introduction.

Authors’ response: The objective is summarized to:

“Summarizing data and appraising the relevant articles of Urea Breath Test (UBT) for diagnosis of *Helicobacter pylori* infection in dyspeptic patients and provide pooled diagnostic accuracy measures.”

2. Table 2 – may be explain TP, FP, TN, FN in a legend/abbreviation list.

Authors’ response: Table 2 name changed to “Tests values of included studies” legend of abbreviations is added under table 2.

3. Page 6, Quality assessment: This tool is designed to assess the quality of primary diagnostic accuracy studies. It would be more appropriate to writeThis tool is designed to assess the quality

Authors’ response: The sentence was modified to:

“This tool is designed to assess the quality of primary diagnostic accuracy studies for inclusion in the systematic review.”

4. Does panel E in figure 3 give substantial more information than panel C and D. Suggestion to be deleted?

Authors’ response: The figure was deleted.