Reviewer’s report

Title: Home screening for bacteriuria in children with spina bifida and clean intermittent catheterization

Version: 3 Date: 19 June 2012

Reviewer: Anne-Marie M Leuck

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The authors sought to evaluate the reliability of leukocyte esterase and dip slides for home evaluation of bacteriuria in children with spina bifida.

Major compulsory revisions:

1. The authors did an admirable job of demonstrating the predictive values of these two testing methods. However, they need to clarify their conclusions. Specifically, if their assertion is that the LET can be used to rule out UTI in symptomatic children, the limitations of including only asymptomatic subjects in this study need to be more completely outlined.

2. Although the study is an evaluation of a test that may eventually be useful in the home setting, this study took place in a primary care office. Were catheterization and testing in the office done by a parent or by office staff? Assuming they were completed by office staff, testing actually done at home may provide different results due to differences in collection technique and test use. All assertions that the current study provides evidence for home testing need to be qualified (e.g. line 157 and line 212).

Minor essential revisions:


2. Abstract, Line 44: Change “The reliability in children with spina bifida with merely SBU however was not studied before.” to “The reliability in children with asymptomatic SBU, however, has not been previously studied.”

3. Abstract, Line 48: Change “LET and dip slide” to “LETs and dip slides.”

4. Abstract, Line 52: Change “evaluated for LET and bacterial growth on dip slide” to “evaluated by LET and dip slide.”

5. Abstract, Line 51: Change “without signs of UTI catheterized” to “without signs of UTI were catheterized.”

6. Background, Line 83: Change “in general population” to “in the general population.”

7. Background, Line 93: Since children with UTI had SBU as well, the wording is
confusing. Please change “with SBU” to “with asymptomatic SBU.”

8. Background, Line 94: Change “is” to “was.”

9. Background, Line 94: The current wording implies that all subjects had SBU. Delete “but in both groups significant bacteriuria is present” to clarify.

10. Background, Line 99: Again, the wording implies that all subjects had SBU. Please delete “with SBU.”

11. Methods, line 103: Delete parentheses around “was.”

12. Methods, line 109: Delete the hyphen between “a” and “selective.”

13. Methods, line 120: Change “of” to “for.”

14. Methods, line 121: It is unclear why the authors felt it was important to analyze other predictors of asymptomatic SBU (e.g. age, sex, prophylaxis) since they point out in Line 204 that there are actually no clinical consequences of asymptomatic SBU. Please add a sentence of explanation in the background section.

15. Results, line 151: Change “did neither improve” to “improved neither.”

16. Discussion, line 160: Delete “of” from “20 percent of false readings.”

17. Discussion, line 161: Change “can not” to “cannot.”

18. Discussion, line 167: Change “on LET test” to “on the LET.” Since the “T” in LET is “test,” this is a redundant statement.

19. Discussion, line 179: Again, change “general population” to “the general population.”

20. Discussion, Line 205: While it makes sense theoretically, it is a reach to assume that the presence of leukocytouria will increase the NPV and PPV of the LET without presenting any evidence to support this assertion. Please change the wording from “will only increase both NPV and PPV” to “will likely increase both NPV and PPV.”

Discretionary revisions:

1. Methods, Line 116: Did the research nurse receive special training to read the dip slides? Since training may change outcomes, it would be interesting to know.

2. Results, Line 136: For a pediatric study, consider explaining why subjects were included up to age 35.

3. Discussion, Line 165: Is there a reason to suspect that the LET would give different results in children with spina bifida than other children with neurogenic bladders? If not, do the authors have ideas as to why they found a higher NPV than previous studies.
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**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.