thereby reduce the duration of mechanical ventilation. Many, but not all, of these strategies were mentioned in our article. We also agree with the suggestion to avoid benzodiazepines, as has been recommended in the recent Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit.5

Namendys-Silva and colleagues are correct about the original purpose of the APACHE II score. We do not agree, however, with their comment about preemptive noninvasive ventilation after extubation. As noted above, an extremely important distinction with the use of noninvasive ventilation after extubation is whether it is administered in a preemptive manner rather than a reactive manner. In the controversial study by Esteban et al.,1 noninvasive ventilation was not initiated before the development of postextubation respiratory distress. Accordingly, it is not appropriate to reference this article with regard to preemptive noninvasive ventilation. We agree with the comments of Namendys-Silva et al. regarding the value of noninvasive ventilation in patients with chronic hypercapnic respiratory failure and obesity.

John F. McConville, M.D.
John P. Kress, M.D.
University of Chicago
Chicago, IL

Since publication of their article, the authors report no further potential conflict of interest.


DOI: 10.1056/NEJMc1300398

Rapid Diagnostic Test for Sleeping Sickness

TO THE EDITOR: Human African trypanosomiasis (HAT), or sleeping sickness, is a life-threatening neglected tropical infection affecting rural populations in sub-Saharan Africa. In West and Central Africa, chronic trypanosomiasis is caused by *Trypanosoma brucei gambiense* infection.1 Control of the disease has been facilitated by the use of the card agglutination test for trypanosomiasis, which is particularly suited for large-scale screening of the populations at risk.2 With the steadily decreasing prevalence of trypanosomiasis, individual rapid diagnostic tests that can be used in primary health centers, that are stable at ambient temperatures, and that are highly specific have become a research priority.1

We developed two rapid diagnostic tests for trypanosomiasis caused by *T. brucei gambiense* infection. The HAT Sero-Strip and HAT Sero-K-SeT tests detect trypanosome-specific antibodies and are, respectively, a dipstick and a lateral-flow device for testing blood (30 μl) or plasma (15 μl); both tests provide results in 15 minutes. The tests contain variant surface glycoproteins of the *T. brucei gambiense* variable antigen types LiTat 1.3 and LiTat 1.5.3

The tests were evaluated with the use of plasma from 198 patients with trypanosomiasis that was confirmed on parasitologic analysis and from 99 local controls with neither clinical nor serologic evidence of the disease. The specimens were collected in the Democratic Republic of Congo4 and obtained from the World Health Organization HAT Specimen Bank (www.who.int/trypanosomiasis_african/research/en). All specimens were tested with the use of immune trypanolysis, the reference test for detecting specific antibodies against *T. brucei gambiense* variable antigen types LiTat 1.3 and LiTat 1.5.5 To evaluate the applicability of these tests when blood was used, samples of reconstituted blood were prepared by adding plasma from patients with trypanosomiasis or from local controls to sedimented blood cells from a healthy donor.

Results are summarized in Table 1. As compared with the immune trypanolysis test, the HAT Sero-Strip showed excellent sensitivity, with specificity being slightly lower when plasma was tested (P=0.05). When reconstituted blood was tested, the sensitivity and specificity of the HAT Sero-Strip did not differ significantly from the
sensitivity and specificity of immune trypanolysis (P>0.05 for both comparisons); for the HAT Sero-K-Set, the sensitivity was lower than that of immune trypanolysis (P = 0.01), but the specificity was not significantly different (P = 0.32).

If further evaluation in the field confirms their diagnostic accuracy, we believe that the HAT Sero-K-Set and the HAT Sero-Strip, with an estimated price of less than $2.50 each, may become valuable tools in the control of trypanosomiasis.

Philippe Büscher, Ph.D.
Institute of Tropical Medicine
Antwerp, Belgium
pbuscher@itg.be

Quentin Gilleman, M.Sc.
Coris BioConcept
Gembloux, Belgium

Veerle Lejon, Ph.D.
Institute of Tropical Medicine
Antwerp, Belgium

Supported by a grant (260260) from the Neglected Infectious Diseases Diagnosis network (Collaborative Project) of the European Commission under the Health Cooperation Work Program of the 7th Framework Program.

Disclosure forms provided by the authors are available with the full text of this letter at NEJM.org.


DOI: 10.1056/NEJMc1210373
Correspondence Copyright © 2013 Massachusetts Medical Society.

**Table 1. Sensitivity and Specificity of Tests for Human African Trypanosomiasis (HAT), According to Reactions with Plasma and Reconstituted Blood from Patients and Local Controls.**

<table>
<thead>
<tr>
<th>Test</th>
<th>Specimen</th>
<th>HAT number</th>
<th>Control number</th>
<th>Sensitivity (95% CI)</th>
<th>Specificity (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trypanolysis LiTat 1.3</td>
<td>Plasma</td>
<td>198</td>
<td>99</td>
<td>98.5 (96.3–100)</td>
<td>100 (100–100)</td>
</tr>
<tr>
<td>Trypanolysis LiTat 1.5</td>
<td>Plasma</td>
<td>198</td>
<td>99</td>
<td>98.5 (96.3–100)</td>
<td>100 (100–100)</td>
</tr>
<tr>
<td>HAT Sero-Strip</td>
<td>Plasma</td>
<td>198</td>
<td>99</td>
<td>98.5 (96.3–100)</td>
<td>96.0 (91.0–100)†</td>
</tr>
<tr>
<td>HAT Sero-Strip</td>
<td>Blood</td>
<td>198</td>
<td>99</td>
<td>97.5 (94.7–100)</td>
<td>98.0 (94.4–100)</td>
</tr>
<tr>
<td>HAT Sero-K-Set</td>
<td>Blood</td>
<td>99</td>
<td>99</td>
<td>93.9 (87.9–99.9)†</td>
<td>99.0 (96.5–100)</td>
</tr>
</tbody>
</table>

* CI denotes confidence interval.
† The result was significantly lower than that for immune trypanolysis (P<0.05 by the chi-square test).

**INSTRUCTIONS FOR LETTERS TO THE EDITOR**

Letters to the Editor are considered for publication, subject to editing and abridgment, provided they do not contain material that has been submitted or published elsewhere. Please note the following:

- Letters in reference to a Journal article must not exceed 175 words (excluding references) and must be received within 3 weeks after publication of the article.
- Letters not related to a Journal article must not exceed 400 words.
- A letter can have no more than five references and one figure or table.
- A letter can be signed by no more than three authors.
- Financial associations or other possible conflicts of interest must be disclosed. Disclosures will be published with the letters. (For authors of Journal articles who are responding to letters, we will only publish new relevant relationships that have developed since publication of the article.)
- Include your full mailing address, telephone number, fax number, and e-mail address with your letter.
- All letters must be submitted at authors.NEJM.org.
- Letters that do not adhere to these instructions will not be considered. We will notify you when we have made a decision about possible publication. Letters regarding a recent Journal article may be shared with the authors of that article. We are unable to provide prepublication proofs. Submission of a letter constitutes permission for the Massachusetts Medical Society, its licensees, and its assignees to use it in the Journal’s various print and electronic publications and in collections, revisions, and any other form or medium.