Reviewer's report

Title: Autonomic nervous system dysfunction predicts poor prognosis in patients with mild to moderate tetanus

Version: 1 Date: 3 September 2004

Reviewer: Thomas Bleck

Reviewer’s report:

1. The authors present a retrospective analysis of tetanus patients to determine whether the prognoses of those with mild or moderate involvement are affected in a manner similar to those with severe disease according to the most commonly used scale.

2. The abstract would benefit from mention of the numbers of patients in the non-ANS group who did or did not have autonomic dysfunction.

3. There is no description of ethical review board approval of this study. If such approval is not required in Pakistan, this should be noted.

4. What were the definitions of hypertension, hypotension, tachycardia, and bradycardia? It is unusual for patients in ICUs not to have one or more of these on occasion due to anxiety, pain, pulmonary embolism, or gastrointestinal difficulties. The authors should state the criteria they used to select the patients with autonomic dysfunction.

5. Was pulmonary embolism prophylaxis employed? If so, in what patients and of what sort?

6. How were the blood pressures and heart rates monitored? Did some of the patients have arterial lines, and if so, how often were the data recorded? For the remainder, presumably the majority, how often were blood pressures and heart rates measured? Were values obtained during titanic spasms included or excluded? What determined whether patients were admitted to the intensive care unit? Could the patients on the floor (particularly those who died of respiratory failure) have experienced autonomic dysfunction that was not noticed?

7. How thorough was the determination of discharge status? Were these questions and examinations investigated and reported for every patient?

8. Did some of the patients receive morphine, which can stabilize autonomic dysfunction in tetanus patients (Rie M, Wilson RS. Morphine therapy controls autonomic hyperactivity in tetanus. Ann Intern Med 1978;88:653-654). If so, how might this have affected autonomic dysfunction?

9. Were some of the patients who suffered respiratory arrests on the floor receiving benzodiazepines or narcotics? Might these drugs have caused or contributed to their respiratory arrests? How many were witnessed to die during tetanic spasms? Could some of them have died of pulmonary embolism rather than from tetanus or its treatment?

10. The data in the last paragraph of the results section should be converted to tabular form; it would be much easier to understand. Presentation in 2x2 tables comparing severity to the presence of autonomic dysfunction for the parameters being evaluated would be very helpful.

11. The literature contains another modern large series of tetanus patients that should be considerec

12. The putative role of tetanus-induced damage to brainstem nuclei has long since been discarded. For a review see Bleck TP, Brauner JS. Tetanus. In Scheld WM, Whitley RJ, Marra CM (eds), Infections of the central nervous system (ed 3). New York, LWW, 2004.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

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

Statistical review: No

Declaration of competing interests:

none