

Laboratory criteria for severe Crimean-Congo haemorrhagic fever

Mesut ORTATATLI¹, Serdar Ümit SARICI²

We have read with great interest the article entitled “Evaluation of the tick bites in a Crimean-Congo haemorrhagic fever (CCHF) endemic area in Turkey”, which reviews tick bites in an endemic area of CCHF in Turkey and has been published in the Turkish Journal of Medical Sciences 2011; 41 (1): 131-136 (1). However, we have some concerns and criticisms regarding the methods and analysis of the data of the article.

In *Materials and Methods* it is stated that questions concerning demographic information, the location where the subject acquired the tick, occupation of the subject, admission date, the anatomical site of the bite, exposure prone activity, the date of the bite (if known), possible duration of tick attachment, and tick removal procedures were recorded. However, detailed descriptions about how the patients were followed with which clinical and laboratory parameters would have been more useful regarding reproducibility and as a guide for future studies about this issue. With this aim clinical and laboratory description criteria suggested for CCHF (fever, headache with a sudden onset, myalgia/arthralgia, fatigue, emesis/vomiting, abdominal pain/diarrhea in anamnesis of the patients and leucopenia, thrombocytopenia, elevations in aspartate aminotransferase (AST), alanine aminotransferase (ALT), lactate dehydrogenase (LDH) and creatine phosphokinase (CPK) as laboratory parameters) might have been used (2).

Two patients with CCHF are discussed in *Results* and *Discussion*. It is stated that these patients had mild clinical and laboratory symptoms thus not requiring ribavirin treatment. However, a standard method for the follow up of such patients as previously described as the criteria of severe disease might have been given (Table) (3). Moreover, detailed numeric values of laboratory measurements (extents of leukopenia, thrombocytopenia, elevated serum ALT, and CPK levels) would have been, if given, more appropriate to inform the readers.

Table. Criteria of severe disease (3).

An activated partial thromboplastin time (aPTT) longer than 60 s.
Elevated prothrombin time (PT)
A platelet count below 20,000/mm ³
An AST level over 700 U/L
An ALT level over 900 U/L
A fibrinogen level below 110 mg/dL
Melena
Hematemesis
Somnolence

Received: 20.06.2011 – Accepted: 10.08.2011

¹ Department of Medical CBRN Defense, Gülhane Military Medical Academy, Etlik, Ankara - TURKEY

² Department of Pediatrics, Gülhane Military Medical Academy, Etlik, Ankara - TURKEY

Correspondence: Mesut ORTATATLI, Department of Medical CBRN Defense, Gülhane Military Medical Academy, Etlik, Ankara - TURKEY

E-mail: mortatatli@gata.edu.tr

In the *Results* section 2 patients with CCHF are mentioned, one of whom is a 46-year-old male who had removed the tick from his leg with tweezers and the other is a 23-year-old female who had removed the tick herself. However, in the *Discussion* section the same 2 cases (with CCHF) are described as a 49-year-old male who had removed the tick himself by crushing it, and a 76-year-old male whose tick had been removed by a physician. This discrepancy in the sections of *Results* and *Discussion* decreases the value of the study, which is deserving of praise.

References

1. Erol S, Yenisolak A, Toros GY, Albayrak A. Evaluation of the tick bites in a Crimean-Congo haemorrhagic fever (CCHF) endemic area in Turkey. *Turk J Med Sci* 2011; 41: 131-136.
2. Ministry of Health of Turkey. Publications of the General Directorate of Primary Health Care Services. Ankara, Turkey: Ministry of Health; 2005 (in Turkish).
3. Ergonul O, Celikbas A, Baykam N, Eren S, Dokuzoguz B. Analysis of risk-factors among patients with Crimean-Congo haemorrhagic fever virus infection: severity criteria revisited. *Clin Microbiol Infect* 2006; 12: 551-4.

Author's Response

Serpil EROL

We have read Drs. Ortatatlı and Sarıcı letter about our article. As we stated in the article, the aim of our study was to evaluate tick bites and their role in the occurrence of Crimean-Congo hemorrhagic fever (CCHF) in an endemic region, rather than to evaluate clinical features of the disease. All the cases were followed for 10 days for occurrence of CCHF by clinical signs and laboratory findings. As the authors have expressed clearly in their letter, clinical and laboratory description criteria for CCHF were: fever, headache of acute onset, myalgia/arthritis, fatigue, emesis/vomiting, abdominal pain/diarrhea, leucopenia, thrombocytopenia, elevations in aspartate aminotransferase (AST), alanine aminotransferase (ALT), lactate dehydrogenase (LDH), and creatine phosphokinase (CK). All patients were evaluated for these parameters at admission and thereafter once every 3 days for 10 days. In the patients who had one or more clinical or laboratory findings, the diagnosis of CCHF was confirmed by the presence

In our particular conclusion, patients with tick exposure should be informed about the course of CCHF, and they should be strongly advised to present to an emergency health care department in the event of fever, sudden onset of headache, myalgia/arthritis, fatigue, emesis/vomiting, and abdominal pain/diarrhea. Hemoglobin level, white blood cell and platelet counts, and levels of AST, ALT, LDH, CPK, PT, and aPTT should be measured during the follow up of these cases (1-3).

With our best regards,

of anti-CCHF-IgM antibody by ELISA and/or CCHF-RNA by reverse transcriptase-polymerase chain reaction (RT-PCR) in the serum samples. The two patients who presented with CCHF had no hemorrhagic manifestations, somnolence, or severe thrombocytopenia requiring platelet replacement. Their ALT and AST values were <350 U/L, LDH <300 U/L, CK <350 U/L, and platelet counts were >40,000/mm³. The lowest leucocyte count was 2200/mm³. The patients also did not need blood or blood products replacement. All clinical symptoms and findings resolved spontaneously in days. Therefore, their clinical status was considered mild. The discrepancy in the sections of *Results and Discussion* concerning patient information is a typing error and the correct one is in the Results section. I think the error occurred during the removal of a part of the text in a previous version of the manuscript.

As the authors indicate in their conclusion, all patients with tick exposure should be evaluated clinically and with laboratory tests at admission and informed about the course of CCHF. They should be advised to present to a health care facility in the event of the presence any sign or symptom of the disease.