

中文題目：生化表現計分系統辨別鉤端螺旋體病與漢他病毒感染

英文題目：The application of biochemical differences between leptospirosis and hantavirus infection

作者：鍾均芙¹，李禎祥²

服務單位：¹高雄長庚醫院內科部，²高雄長庚醫院內科部感染科

Background

Leptospirosis and hantavirus are infectious diseases transmitted by rodents. Despite clinical suspicion, the characters of the aforementioned diseases shared great resemblance and were often difficult to discern. The objective of this study is to differentiate these two entities with clinical and biochemical clues.

Method:

A retrospective analysis was performed on a database of patients between 2010/9-2020/7 at KCGMH. 44 patients were selected based on compatible clinical manifestation and biochemical features upon presence. Centers for disease control had also been notified of infectious disease and provided the eventual serology evidence for the suspicious cases. Using a scoring system that consists of five parameters: serum WBC, creatinine, creatine kinase, total bilirubin, and C-reactive protein; we attempted to evaluate and predict whether the disease entity to be leptospirosis or hantavirus infection.

Results:

We applied 3 cut-off values (0, 1, 2) for 5 biochemical parameters (WBC, total bilirubin, CRP, Cre, CK) in our scoring system. Scores of 0, 1, or 2 were given based on the values WBC (/ μ L): ≤ 7500 , 7500–15,000, and $> 15,000$; total bilirubin (mg/dL): ≤ 3 , 3–10, and > 10 ; CRP (mg/dL): ≤ 5 , 5–15, and > 15 ; creatinine (mg/dL): ≤ 1.5 , 1.5–3, and > 3 ; CK (U/L): ≤ 500 , 500–1000, > 1000 . Patients without any of the above parameters, or absence of final CDC serology were excluded from study. The analyzed blood tests were drawn upon the patient's initial encounter. When total score reaches more than 3 it was regarded as positive for leptospirosis. We would examine whether the figured supposition via scoring system is accordant with the final serology results of the CDC were consistent. Detailed statistical analysis would be conducted subsequently

Conclusion:

The scoring system could prompt early attention to leptospirosis in suspected patients, and provides

subtle clues to aid the differentiation of leptospirosis and hantavirus. However, owing to the non-specific characters of these diseases, judicious assessments and further studies would be required. Serology remained the gold standard of diagnosis.