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## PREDICTORS OF DISEASE SEVERITY OF LEPTOSPIROSIS ON ADMISSION – A SRI LANKAN STUDY

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**Background** - Leptospirosis is a potentially lethal zoonotic disease. Limited information is available on disease severity of leptospirosis (Tubiana et al., 2013). Predictors of disease severity on admission will help the clinician to anticipate serious complications. This study was designed to analyse the severity predictors of leptospirosis.

**Method** - Patients with suspected leptospirosis based on the WHO surveillance criteria (WHO, 2011) were recruited at three major hospitals in Sri Lanka in 2015. Confirmation was based on microscopic agglutination (MAT titre  $\geq$  1:400) or polymerase chain reaction tests. Patients were divided into severe and non-severe groups based on acute kidney injury, acute respiratory distress syndrome, acute myocarditis and liver failure. Analysis of clinical and laboratory parameters on admission, were done to identify predictors of severe disease.

**Results** - Out of 62 leptospirosis patients, 19 had severe disease. Sub-conjunctival haemorrhages (OR - 3.18; CI - 0.96-10.47;  $p = 0.05$ ), jaundice (OR - 4.99; CI - 1.57-15.86;  $p = 0.006$ ), haemoglobin  $< 12$  g/dL (OR - 3.2; CI - 1.04-9.84;  $p = 0.04$ ), white blood cell count  $> 11 \times 10^9/L$  (OR - 6.02; CI - 1.76-20.61;  $p = 0.004$ ), platelet count  $< 100 \times 10^9/L$  (OR - 5.51; CI - 1.67-18.17;  $p = 0.005$ ), blood urea  $> 10$  mmol/L (OR - 7.13; CI - 2.07-24.54;  $p = 0.002$ ) and serum creatinine  $> 120$  micmol/L (OR - 11.43; CI - 2.49-52.51;  $p = 0.001$ ) on admission, were significantly associated with severe leptospirosis.

**Conclusions** - Clinical features and laboratory investigations predict severe leptospirosis on admission. Presence of these will need aggressive treatment and close monitoring.

### References

Tubiana S, Mikulski M, Becam J, Lacassin F, Lefèvre P, Gourinat AC, Goarant C, D'Ortenzio E. Risk factors and predictors of severe leptospirosis in New Caledonia. *PLoS Negl Trop Dis.* 2013;7(1).  
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