

Predictors of dialytic management and mortality among leptospirosis patients with acute renal failure (ARF) at the National Kidney and Transplant Institute (NKTi)

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Background: An outbreak of Leptospirosis cases occurred in Oct 2009 following typhoon Ketsana in Sept 26, 2009. Many areas of Manila were flooded. This is a prospective observational study with the following objectives: describe the clinical profile of Leptospirosis patients that needed dialysis, determine their outcome and risk factors for dialysis and mortality.

Method: Algorithmic approach to diagnosis (WHO Faine's criteria and positive culture/MAT) and treatment of Leptospirosis were followed. Patients were classified as needing dialysis or not based on initial clinical evaluation. Descriptive statistics and univariate and multivariate analyses were used to analyze data.

Result: Of the 154 cases, majority were males (n=130, 84.4%), with mean age of 26. 128 (83.12%) had ARF, 94 (73.4%) of them necessitated dialysis: 76 (81%) hemodialysis and 18 (19%) peritoneal dialysis. Confirmed cases were 113 (73.37%) by MAT & 4 (3%) by positive blood culture. Overall mortality was 20 (15.6%), half of them were dialyzed and majority died of pulmonary hemorrhage. The predictors for dialysis were: animal carcass exposure, RR 2.08 (1.13-3.84, .02); headache/meningismus, RR 1.97 (1.079-3.61, .03); oliguria, RR 2.34 (1.44-2.65, .02) and Crea>7.1mg/dL, RR 1.10 (1.01-1.21, 0.03). The predictors for mortality were: jaundice, RR 2.67 (1.13 - 6.3, .03); hypotension, RR 1.52 (1.13-3.22, .03); flood exposure >4hrs, RR 1.13 (1.03-1.24, .01), pulmonary hemorrhage, RR 2.32 (1.76 -4.33, .02) and platelet count <100,000mm³, RR 2.33 (1.17-4.6, .02).

Conclusion: Majority of leptospirosis cases seen at NKTi were severe, 64% dialyzed. The predictors for dialysis are animal carcass exposure, headache/meningismus, oliguria & Crea>7.1mg/dL while predictors for mortality are jaundice, hypotension, flood exposure >4hrs, pulmonary hemorrhage and platelet count <100,000mm³.

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