

Hemorrhagic fever with renal syndrome

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Introduction: Hemorrhagic fever with renal syndrome (HFRS) is a rodent-borne zoonosis, caused by members of the virus family Bunyaviridae, genus Hantavirus. The subtype Dobrava is the most frequent in Albania and Balkan region and is the cause of severe HFRS in this area. Carefully managed supportive care is critical to recovery from severe disease.

AIM: The aim of this study was to describe epidemiological and clinical patterns of HFRS in patients diagnosed from 2011 to 2015 and the corresponding stage of the renal function impairment.

Methods: We analysed 31 patients in a prospective study. Data represent geographical spread, laboratory and clinical patterns. Renal involvement was defined according the RIFLE and Acute Kidney Injury Network (AKIN) classification. The diagnosis has been confirmed by serological test performed with ELISA.

Results: All patients were admitted in a tertiary hospital with HFRS. 29 pts (93.5%) were male and 2 pts (6.5%) female. The mean age was 39.2 years old. 14 pts (45.2%) were from Northeast Albania. The occupational distribution was: farmer 11 pts (35.4%), shepherd 8 pts (25.8%), beekeeper 4 pts (12.9%), woodcutter 4 pts (12.9%), visitor 4 pts (12.9%). The disease outbreaks occurred during the period June - July. Mean hospital stay was 15.6 days. The main signs and symptoms presented at the moment of admission were: fever in 31 cases (100%), malaise 29 pts (93.5%), headache 24 pts (77.4%), myalgia 21 pts (67.7%), abdominal pain 22 pts (71%), back pain 19 pts (61.3%), vomiting 19 pts (61.3%), diarrhoea 4 pts (12.9%), anorexia 14 pts (45.2%), and low urine output 25 pts (80.6%). Mean systolic blood pressure at admission was 110.13 mmHg (160-74), and diastolic blood pressure 69.55 mmHg (40-90).

The mean values of laboratory tests on admission were: urea 107.2 ± 71.6 mg/dl, creatinine 2.79 ± 1.8 mg/dl, K 3.61 ± 0.4 mEq/L, haemoglobin 14.94 ± 2.5 g/dl, hematocrit 43.79 ± 6.2 %, white blood count $10122 \pm 5030/\text{mm}^3$, platelets count $48619.4 \pm 28275.1/\text{mm}^3$, AST 102.4 ± 86.6 IU/L, ALT 93 ± 104.2 IU/L, CK 587.5 ± 634 IU/L, LDH 458 ± 220.9 IU/L.

Serological assay- (ELISA) detected positive IgM and IgG anti-hantavirus. Virus serotype, detected by the real time one step reverse transcriptase polymerase chain reaction (RT-PCR) was DOBRAVA.

Stage of Acute renal injury resulted: R (6.5%), I (12.9%) and F (80.6%) according to RIFLE criteria, and 1 (12.9), 2 (16.1%), 3 (71%) according to AKIN classification.

Dialysis was required for 10 patients (32.2%).

Mortality rate was 9.67% (3 patients).

Conclusion

Hemorrhagic fever is a rare disease in Albania but with periodic outbreaks. Albanian northeast area is endemic. Male gender, specifically farmers and shepherds, represent the majority of people diagnosed with this condition. The important finding in this cohort is the high prevalence of significant renal function impairment.

Keywords: hemorrhagic fever, Albania, RIFLE, AKIN.

Biography

Elvana Rista is presently completing her PhD from the University of Tirana, School of Medicine. She previously graduated with a bachelor and a master degree from the School of Medicine, at the same university. Elvana is now employed as a Nephrologist in Hygeia Hospital in Tirana. Throughout her career, she has published about than 10 papers with health related professional magazines and has been serving these past five years, as a member of ERA-EDTA.

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