

**O1054 A comparison of adult and paediatric Crimean-Congo haemorrhagic fever: a retrospective cohort study**

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**Background:** Crimean-Congo haemorrhagic fever (CCHF) is a major emerging infectious disease threat that is endemic to southeast Europe, Asia, Middle East and Africa. Children with CCHF are reported to have a milder disease course compared to adults, in contrast other viral haemorrhagic fevers. The aim of this study was to evaluate the demographic characteristics, clinical and laboratory features, and outcomes of adult and pediatric patients admitted with CCHF.

**Materials/methods:** We conducted a retrospective cohort analysis to compare the epidemiological, clinical and laboratory features of adults and children admitted to Ondokuz Mayıs University Hospital, Turkey with confirmed CCHF, between 2011 and 2018.

**Results:** During the study period 307 adult and 73 pediatric suspect CCHF cases were hospitalized with 142/307 (46.3%) adults and 25/73 (34.2%) confirmed CCHF PCR positive. In the adult cohort 86/142 (60.6%) were male with a median age of 52 years (18-83), while 18/25 (72%) were male with a median age 12 years (2-17) in the paediatric group. There were no statistically significant differences between the groups according to exposure risk factors, comorbidities or clinical features of fever, bleeding, hepato-splenomegaly and petechiae. Rates of secondary infection between groups were similar. Duration of onset of symptoms prior to hospital admission was shorter in the paediatric group (2 vs 3 days,  $p=0.024$ ) with a longer length of hospital stay observed (7 versus 12 days,  $p<0.001$ ). Headache, arthralgia/myalgia and dyspnea were statistically more common in adults with loss of appetite, sore throat, and conjunctival injection more prevalent in children. Laboratory characteristics are presented in Table 1. The case fatality rate of the adults was 15.5% (22/142), with no fatal cases occurring in children ( $p=0.048$ ).

**Conclusions:** This is the first direct comparison of the clinical and laboratory features in adult and pediatric patients with CCHF that provides insights into the milder course of disease in children. Children had statistically significantly longer length of stay, but lower median admission levels of liver enzymes and C-reactive protein, with higher platelet and lymphocyte counts.

**Table 1. Laboratory features at admission of adult and paediatric patients with confirmed CCHF**

Laboratory parameter	Adult (n=142) (median, range)	Child (n=25) (median, range)	P value
Creatinine (mg/dL)	0,8 (0,4 - 5,8)	0,6 (0,4 - 1)	<b>0,001</b>
White blood cell (thousand/ $\mu$ L)	2,2 (0,5 - 20)	2,4 (0,7 - 6,1)	0,624
Lymphocyte (thousand/ $\mu$ L)	0,4 (0,1 - 3,1)	0,7 (0,2 - 3,8)	<b>0,023</b>
Platelet count (thousand/ $\mu$ L)	53 (7 - 262)	83 (14 - 237)	<b>0,018</b>
Activated partial thromboplastin time (second)	34,9 (21,8 - 190)	32,6 (7 - 63,4)	0,082
Prothrombin time (second)	12,2 (8,8 - 120)	13,1 (9,8 - 42)	0,121
Aspartate aminotransferase (U/L)	152,5 (21,9 - 7516)	65 (22 - 665)	<b>0,015</b>
Alanine aminotransferase (U/L)	70,3 (8,6 - 1583)	48,2 (12 - 335)	0,069
C-reactive protein (mg/L)	11,2 (0,2 - 227)	2,9 (0,7 - 35,5)	<b>0,002</b>

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