

Table 1 Distribution of mean values for the clinical blood tests and the CSF specimens of children diagnosed with meningitis (n = 197) admitted to hospital, Halabja, 2023

Sample	Test	Age	Normal range ^a	Mean	SD	P-value
Blood	WBC ($\times 10^9/L$)	0–30 days	9.1–34.0	–	–	–
		1–23 months	6.0–14.0	13.42	5.86	0.244
		2–9 years	4.0–12.0	26.49	10.3	2.120
		10–17 years	4.0–10.5	10.31	0.85	0.825
	Neutrophils (%)		54.0–62.0	65.9 ^b	16.5	0.045
	Lymphocytes (%)		25.0–33.0	23.4	15.4	0.430
	ESR (mm/hr)		< 20.0	29.6	20.7	0.070
	CRP (mg/L)		< 5.0	19.2 ^b	20.0	0.0048
CSF	WBC (cells/ μL)	Neonate	< 20.0	–	–	–
		≥ 1 month	< 5.0	661	960	6.00E-11
	RBC (cells/ μL)		0	102.5 ^b	229.0	0.000004
	Neutrophils (% cells)		< 25.0	57.8 ^b	30.7	0.012638
	Lymphocytes (% cells)		< 75.0	25.6	20.6	0.91
	Glucose (mg/dL)		> 50.0L	57.8	13.1	–
	LDH U/L		< 40.0	55.0 ^b	33.4	0.00003
	Lactate (mg/dL)		10.0–22.0	23.2	23.8	0.71
	Total protein (mg/dL)		20.0–45.0	43.4	17.8	0.34

SD = standard deviation; WBC = white blood cells; CSF = cerebrospinal fluid; ESR = erythrocyte sedimentation rate; CRP C = reactive protein; RBC = red blood cells; LDH = lactate dehydrogenase. $P < 0.05$ was considered statistically significant.

^aValues given for normal ranges were defined according to the instruments, commercial kits and methods of analysis usually used in the laboratories. ^bSignificantly different in comparison to the normal range value.