SERUM MAGNESIUM LEVELS IN CHILDREN WITH AND WITHOUT MIGRAINE: A CROSS-SECTIONAL STUDY

Aim: To study the association between serum magnesium levels and occurrence of migraine among children & adolescents

ENROLLED CHILDREN (5-18 yrs)

CASES

Children with migraine diagnosed as per ICHD-3 classification, confirmed by a pediatric neurologist **(n=35)**

CONTROLS

Age- and sex-matched children from the pediatric outpatient department **(n=35)**

ASSESSMENT

Serum magnesium level was measured using Xylidyl blue method by automatic analyzer.

Hypomagnesemia defined as serum Mg concentration <1.8 mg/dL.

RESULTS

	Serum magnesium levels (mg/dL), median (IQR)		*P* value
	CASES	CONTROLS	
ALL CHILDREN	2.0 (2.0,2.1)	2.2 (1.9, 2.2)	**0.23**
Male (*n*=40)	2.1 (1.9, 2.2)	2.2 (1.9, 2.2)	**0.5**
Female (*n*=30)	2.0 (2.0, 2.1)	2.1 (1.9-2.2)	**0.3**

ADOLESCENTS (10-18 yrs):

Serum Mg levels were significantly lower among children with migraine compared to controls [2.0 (1.9, 2.1) vs. 2.2 (2.0, 2.2) mg/dL; *P*<0.045]

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CONCLUSION: There is a significant association between low serum magnesium levels and the occurrence of migraine in adolescents, which needs further exploration

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