

# Biotechnology, Stem Cell and Molecular Diagnostics

April 16-17, 2018  
Amsterdam, Netherlands

Tayyaba Hassan et al., Biochem Mol Biol J 2018 Volume: 4  
DOI: 10.21767/2471-8084-C2-012

## FREQUENCY OF LOW ALKALINE PHOSPHATASE ACTIVITY IN PAEDIATRIC POPULATION: IS IT REALLY RARE?

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**Objective:** Little attention has been paid to hypophosphatasia or low serum alkaline phosphatase (ALP) levels. Our aim was to determine the frequency of low serum ALP in pediatric population being tested for ALP in our laboratory.

**Material & Methods:** A retrospective laboratory based study was conducted over a period of ten years. Serum ALP of all children (18 years) being tested at clinical laboratory of AKUH from January 2007 to December 2016 was extracted from laboratory information system along with their demographics. The data were double checked by two data entry operators in EpiData (Version 3.2) and data entry errors were removed. Duplication values like matched and mismatched were also checked by XLSTAT software. Clean data then was converted into SPSS (Version 21). Frequencies and percentages were calculated for all study categorical values. Quantitative variable was calculated in terms of mean and standard deviation i.e. age and ALP. Cut off < 100 U/L was taken for low serum ALP.

**Results:** In ten years, a total of 180,000 children were tested for serum ALP out of which low ALP values were seen in 21886 children (12.1%). Out of the total children with low ALP, 66.3% (n=14532) were females and 33.5% (n=7351) were males. Children were further stratified into four age groups and low ALP was found in 1% (n=1789) in age <5 years, 0.60% (n=1152) in age group 5-10 years, 2% (n=3677) in age group from 11-14 years and 8.3% (n=15268) in age group 15-18 years.

**Conclusion:** The frequency of low ALP was noted in 12.1% of the children. Patients with low ALP require further clinical, biochemical and radiological assessment to rule out hypophosphatasia.

### Biography

Tayyaba Hassan completed her MBBS from University of Health Sciences, Lahore, Pakistan with distinctions in the disciplines of Biochemistry and Behavioural Sciences. She is pursuing her second year of Medical Residency in the specialty of Chemical Pathology from Aga Khan University Hospital (AKUH), Karachi, Pakistan, where she also holds the administrative position of Section Chief of Residents. She was recipient of Resident's Research Grant in 2017. Her research interests include novel diagnostic methods for liver failure and inborn errors of metabolism.

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