

Adela Chirita-Emandi, Maria Puiu

Genetics Department, University of Medicine and Pharmacy “Victor Babeș” Timișoara, Romania
Genetics Department, Clinical Emergency Hospital for Children “Louis Țurcanu” Timișoara, Romania

Background:

In Romania (latitude 48°15'N to 43°40'N), vitamin D supplementation is a common practice mostly in 0-2 year old infants.

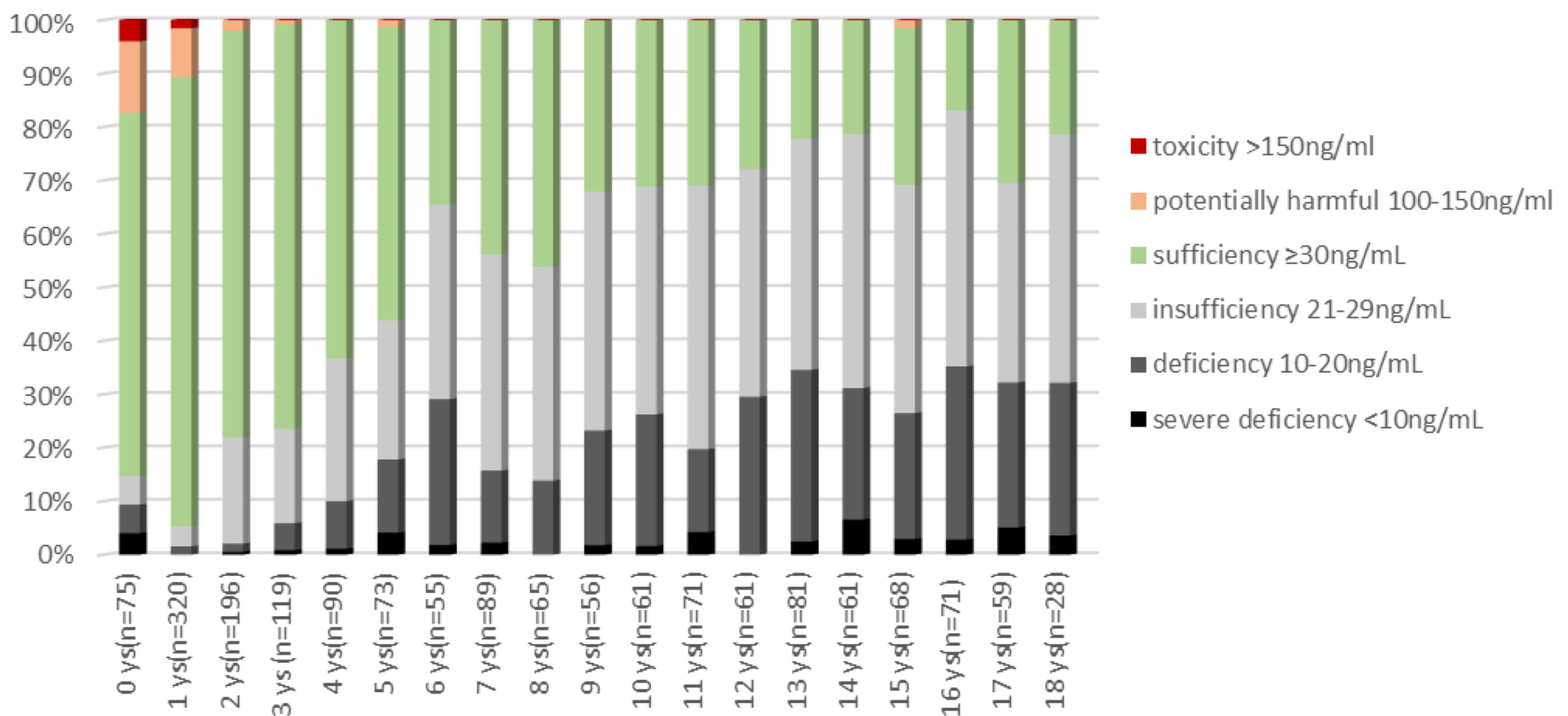
Aim: to evaluate the seasonal and age variation of vitamin D status in a large Romanian pediatric patient population.

Methods:

1395 individuals, 0-18years, from across Romania performed 1699 vitamin D assessments (2012-2014) in a chain of private laboratories.

Vitamin D (25-OHvitamin D2&25-OHvitamin D3) was measured using HPLC.

Vitamin D status with regards to age



Results:

Female to male to ratio was 1:1.3.

Mean vitamin D levels

-↗ from April (36.9ng/ml)-September (44.8ng/ml)

-↘ from October (43.9ng/ml)-March (32.6 ng/ml).

-were 68.9ng/ml before the age of 1 year

-were 56.6ng/ml in 1-2 years old's,

-were 26.6ng/ml ages 3 to 18 years.

There was no gender difference for mean Vitamin D.

Children under the age of 1 year presented the highest percentage of vitamin D toxicity (3.4%) and possibly harmful levels (9.4%).

Conclusion:

25-hydroxyvitamin D levels >100ng/ml were prevalent in children 0-1 year old (12.8%).

This might be attributed to supplementation errors and the fact that high-risk individuals were more likely to have a medical check-up.

Nonetheless, it stresses on the need to increase awareness on the importance of preventing Vitamin D supplementation administration errors in young age.

We acknowledge the management of Bioclinica laboratories for providing the anonymized data set.