Vitamin D status in Romanian children 0-18 years
should we be more careful regarding supplementation? –
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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, 0-18 years, from across Romania performed 1699 vitamin D assessments (2012-2014) in a chain of private laboratories.
Vitamin D (25-OH vitamin D2 & 25-OH vitamin D3) was measured using HPLC.

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.

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