

LETTER TO EDITOR

A suspected *hypervitaminosis A*

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To the Editor,

Vitamin A is a pivotal biochemical factor required for normal proliferation and differentiation as well as for specialized functions, such as vision.

Vitamin A toxicity is very uncommon, but when it occurs, it can be serious and even fatal (1).

Here, we report a case vitamin A intoxication with high liver function tests, thrombocytopenia and appearance virosis.

The patient is a 32-year-old female with no significant past medical history presented to our emergency department twice with abdominal pain, headache accompanied by nausea (Table 1).

On admission to the hospital, as per current hospital policy, a nasopharyngeal swab was tested for the presence of SARS-CoV-2 RNA, resulted negative (2).

The first time, in the emergency department, the patient's initial vital signs were a temperature of 36.8°C, heart rate of 131 beats per minute (BPM), blood pressure of 114/75mmHg, respiratory rate of 37 breaths per minute and an oxygen saturation of 99% on room air.

A complete blood count (CBC) showed a normal white blood cells (WBC), mild anemia and thrombocytopenia. Bone marrow showed a remarkably reduced number of erythroid and megakaryocytic cells.

Chemistry showed normal serum levels of total bilirubin, liver enzymes (AST and ALT), and alkaline phosphatase.

After 2 days the patient returned to the emergency room, and due to persistent symptoms, she was then transferred to the surgery for further investigations.

Although physical examination revealed only facial flushing, we suspected acute vitamin A intoxication due to his diet history (she has been taking 4 tablets of 50.000 IU of Retinol and 50 mg dl-alpha tocopherol acetate daily for the last weeks for treatment acne and redness skin and followed a diet that was high in vitamin A rich in liver and carrot juice), therefore we checked his serum retinol levels and blood biochemistry.

A complete blood count, showed increase WBC of $13,08 \times 10^3/\text{ul}$ with lymphocyte 68 percent.

The liver function tests, serum calcium levels were increase and serum retinol levels were markedly elevated at 435 mcg/dL, which confirmed vitamin A intoxication.

After four days of the suspension of vitamin A, although she had developed desquamation of facial skin, his symptoms had improved, the laboratory tests were resulted normal as shown in the table and his serum retinol level was 78 mcg/dL.

Diagnosis of vitamin A toxicity is clinical. However, if clinical diagnosis is equivocal, laboratory testing may help.

In our case, we were unable to measure serum retinyl ester levels that are more commonly used to diagnose acute vitamin A intoxication, and the diagnosis was based on serum retinol levels. Therefore, when

Table 1. Medical history after admission to hospital.

Time After Starting	HBG (g/dl)	HCT (%)	WBC (x10 ³ /ul)	PLT (x10 ³ /ul)	AST (U/L)	ALT (U7L)	Alk P (U/L)	GGT (U7L)	Bilirubin (mg/dL)	Serum Retinol (28 to 86 mcg/dL)	Other
January 2022	14.4	44.4	6.50	200	18	16	35	-	0.58		
ER 1 Day	10.8	35.6	7.33	85	25	15	69		0.87		
ER 2 Day	10.5	35.1	13.08	77	103	82	272	107	2.15	435	
Surgery 1 Day	10.6	35.1	12.87	76	110	98	287	160	1.21	91	Vitamin A stopped
Surgery 4 Day	11.1	38.1	8.58	157	31	29	98	53	0.98	78	

acute vitamin A intoxication is suspected, emergency physicians should obtain an accurate diet history and check the serum retinol or retinyl ester levels to make a definitive diagnosis. Differentiating vitamin A toxicity from other disorders may be difficult.

Moreover the interruption of vitamin A treatment was immediately followed by clinical and biochemical, therefore thrombocytopenia and elevated transaminases are thought to be due to hypervitaminosis A, in agreement with colleagues Arzu Ataseven et al (3).

We believe that Laboratory testing is one of the most widely used diagnostic interventions supporting medical decisions, and further investigations regarding the etiology and prevalence of this phenomenon are necessary.

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