Dr. Mehul R. Solanky
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Advanced Diagnostic Lab
IMMUNO-DIAGNOSTIC & PATHOLOGY LABORATORY
Halar Road Cross Lane, Besides L.I.C. Bldg.
Valsad-396 001. Ph.: (02632) 243280. Mo.: 99250 49280

SHAILESH D MEHTA
Male/62 Years

Reg. Date : **09/05/2022**
Lab. No **96897-18**
Sample No
701

Ref. Dr.
Dr. SAMIR VORA MD (PSM)
VIBRANT HOSPITAL VAP1

H E M A T O L O G Y R E P O R T

Test	Result	Unit	Ref. Range
Haemoglobin:	14.0	g/dL	13.0 - 17.0 g/dL
Total Leucocyte Count:	6950	X 10^3 / µL	4000 - 10000 /uL
Differential Count			
Neutrophils:	60	%	40-80
Eosinophils:	**09**	%	1.0-6.0
Basophils:	00	%	<1-2
Lymphocytes:;	23	%	M: 20-40; F: 20-40
Monocytes:	08	%	2-10
Neutrophils Absolute Count:	4.12	X 10^3 / µL	2.0-7.0
Eosinophils Absolute Count:	0.65	X 10^3 / µL	0.02-0.50
Basophils Absolute Count:	0.05	X 10^3 / µL	0.02-0.10
Lymphocytes Absolute Count:	1.57	X 10^3 / µL	1.0-3.0
Monocytes Absolute Count:	0.56	X 10^3 / µL	0.2-1.0
Total RBC Count:	4.85	X 106 / µL	M: 4.5-5.5; F: 3.9-4.8
Hematocrit (HCT):	42.2	%	42 - 52 %
MCV:	86.9	fL	83 - 101
MCH:	28.9	pg	27-32
MCHC:	33.2	g/dL	31.5 - 34.5
RDW-SD:	**51.8**	fL	39 - 46
RDW-CV:	**14.5**	%	11.6 - 14.0
Platelets Count:	212000	/µL	150000 - 400000
Plateletcrit (PCT):	0.178	%	
Mean Platelet Volume	8.4	fL	
Malaraial Parasite	M.P. are not seen		

Method: Fully automated bidirectional interfaced analyser (6 Part Differential **SYSMEX XN-1000)**.

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BIOCHEMISTRY REPORT

Test	Result	Unit	Ref. Range
S.Creatinine:	0.75	mg/dL	0.60 - 1.30 mg/dL

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VIBRANT HOSPITAL VAP1

SERUM VITAMIN-D LEVEL

Test	Result	Unit	Ref. Range
S. VITAMIN D Level : (25-Hydroxy vitamin D)	**6.05**	ng/ml	11.1 - 42.9 ng/mL > 30 nG/mL IS DESIRABLE

INTERPRETATION

- Vitamin D is a fat-soluble steroid hormone precursor that is mainly produced in the skin by exposure to sunlight.
- Vitamin D is biologically inert and must undergo two successive hydroxylations in the liver and kidney to become the biologically active 1,25□dihydroxyvitamin D.
- The two most important forms of vitamin D are vitamin D_3 (cholecalciferol) and vitamin D_2 (ergocalciferol).
- In contrast to vitamin D_3, the human body cannot produce vitamin D_2 which is taken up with fortified food or given by supplements.
- In human plasma vitamin D_3 and D_2 are bound to the vitamin D binding protein and transported to the liver where both are hydroxylated to form vitamin D (25□OH), i.e. 25□hydroxyvitamin D.
- **It is commonly agreed that vitamin D (25□OH) is the metabolite to determine the overall vitamin D status as it is the major storage form of vitamin D in the human body.**

This primary circulating form of vitamin D is biologically inactive with levels approximately 1000□fold greater than the circulating 1,25□dihydroxyvitamin D. The half-life of circulating vitamin D (25□OH) is 2□3 weeks.

- Most of the vitamin D (25□OH), measurable in serum, is vitamin D_3 (25□OH) whereas vitamin D_2 (25□OH) reaches measurable levels only in patients taking vitamin D_2 supplements.Vitamin D_2 is considered to be less effective.
- Vitamin D is essential for bone health. In children, severe deficiency leads to bone-malformation, known as rickets. Milder degrees of insufficiency are believed to cause reduced efficiency in the utilization of dietary calcium.
- Vitamin D deficiency causes muscle weakness; in elderly, the risk of falling has been attributed to the effect of vitamin D on muscle function.
- Vitamin D deficiency is a common cause of secondary hyperparathyroidism.
- Elevations of PTH levels, especially in elderly vitamin D deficient adults can result in osteomalacia, increased bone turnover, reduced bone mass and risk of bone fractures.
- Low vitamin D (25□OH) concentrations are alsoassociated with lower bone mineral density.
- In conjunction with other clinical data, the results may be used as an aid in the assessment of bone metabolism.
- So far, vitamin D has been shown to affect expression of over 200 different genes.
- Insufficiency has been linked to diabetes, different forms of cancer, cardiovascular disease, autoimmune diseases and innate immunity.

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H A E M O G L O B I N V A R I A N T S T U D Y (HPLC)

Test	Result	Unit	Refrence Range
HEMOGLOBIN A:	96.3	%	94.3 - 98.5
HEMOGLOBIN A2:	2.9	%	1.5 - 3.7
HEMOGLOBIN F:	<0.8	%	0.0 - 2.0
HEMOGLOBIN S:	0	%	0.0 - 0.0
HEMOGLOBIN D:	0	%	0.0 - 0.0
HEMOGLOBIN C:	0	%	0.0 - 0.0
PEAK2:	-	%	0.0 - 9.6
UNKNOWN UNIDENTIFIED :	-	%	0.0 - 2.0

IMPRESSION: **Chromatogram shows no evidence of Beta Thalessemia or structural hemoglobinopathy.**

Test Method (s) - HB VARIANT ANALYSIS- (HPLC) ON **BIORAD D10**
Interpretations & remarks

1. All results have to be correlated with age and history of blood transfusion If there is history of blood transfusion in last 3 months, repeat testing after 3-4 months from last date of transfusion is recommended.
2. In case of **haemoglobinopathy, parents or family studies and counseling is advised.**
3. This test detects Beta thalassaemia and haemoglobinopathies. **DNA analysis is recommended to rule out alpha thalassaemia and silent carriers.**
4. Linearity range of HbF is 0.8 % - 16.5 % on Biorad D-10 instrument, however, values in excess of the reportable range have been provided for ease of interpretation. Hb F value higher than 16.5 % usually elutes in LA1c/CHb window or HbA1c window seen on the HPLC chromatogram.
5. Mild to moderate increase in fetal heamoglobin can be seen in some acquired conditions like Pregnancy, Megaloblastic anaemia, Thyrotoxicosis, Hypoxia, Chronic kidney disease, Recovering marrow, MDS, Aplastic anaemia, PNH, Medications (Hydroxyurea, Erythropoietin) etc.
6. **Iron deficiency tends to reduce Hb A2 Value ,so repeat test after treating IRON DEFICIENCY.**
7. **Megaloblastic Anemia could falsely elevate HbA2 VALUE**
6. P3 window- Above 10% is often indicative of either denatured forms of hemoglobins or may suggest a possibility of abnormal haemoglobin variant. Hence,repeat analysis with fresh sample or DNA studies is advised.
7. HbA1c window - Glycated haemoglobin is eluted in HbA1c window on the chromatogram which should be correlated with patient's diabetic status. Rarely, it may suggest a possibility of abnormal Hb variant requiring further DNA Studies for confirmation.

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