

NAME: M. RAMYA

AGE / SEX: 24 / F

REF. DOCTOR: PADALA HARIKA SRI VENKATA RAMYA PATIENT ID: A6

COLLECTION DATE, TIME: 03/11/2024, 07:13

REPORTING DATE, TIME: 03/11/2024, 10:01

INVESTIGATIONS	RESULTS	UNITS	BIOLOGICAL REFERENCE INTERVAL
BLOOD GLUCOSE (F) Method: Enzymatic, hexokinase.	78	mg/dl	70 – 110
SERUM CALCIUM Method: Spectrophotometry.	9.53	mg/dl	8.2 – 10.8
SERUM IRON Method: Spectrophotometry.	15.0	ug/dl	60 – 175 MALE 50 – 170 FEMALE
HEMOGLOBIN Method: Coulters principle. (BECKMAN COULTER UniceL DxH 800)	11.8	gms%	12 – 15

***** END OF REPORT *****

F. SURESH MSC (BIOCHEM) MLT
 SENIOR BIO-CHEMIST.

B. INDIRAPRIYA DARSHINI
MSc (MICRO) PG, DMLT (NIMS)

SUGGESTED CLINICAL CORRELATION, IF THERE IS NEED, KINDLY DISCUSS.

Note: * The reported above results are for the reference of referring doctor only.
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INVESTIGATIONS	RESULTS	UNITS	BIOLOGICAL REFERENCE INTERVAL
VITAMIN - D (25 Hydroxy)	13.53	ng/mL	Deficiency - < 10 insufficiency - 10 - 29 Sufficiency - 29 - 100 Toxicity - > 100

Lower-than-normal levels suggest a vitamin D deficiency. This condition can result from:

- Lack of exposure to sunlight
- Lack of adequate vitamin D in the diet
- Liver and kidney diseases
- Malabsorption
- Certain medicines, including phenytoin, Phenobarbital, and rifampin.

A vitamin D deficiency may lead to:

- Low blood calcium levels (hypocalcaemia)
- Thin or weak bones (rickets, osteoporosis and osteomalacia)
- High levels of parathyroid hormone (secondary hyperparathyroidism)

Total 25-hydroxy vitamin D (D2 + D3) is the correct measure of Vitamin D status.
 Higher-than-normal levels suggest excess vitamin D, a condition called hypervitaminosis D. It is usually caused by vitamin D in the form of doctor-prescribed dietary supplements.

***** END OF REPORT *****

T. SURESH MSC(BIOCHEM)MLT
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B.INDIRAPRIYA DARSHINI
 MSc (MICRO)PG,DMLT (NIMS)

SUGGESTED CLINICAL CORRELATION. IF THERE IS NEED, KINDLY DISCUSS.

ABOVE TESTS DONE BY FULLY AUTOMATED CLIA ON BECKMAN COULTER Dxl 600

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LIPID PROFILE - (F)

INVESTIGATIONS	RESULTS	UNITS	REFERENCE INTERVAL
TRIGLYCERIDES	200	mg/dl	< 150
TOTAL CHOLESTEROL	168	mg/dl	< 200
HDL - CHOLESTEROL	36	mg/dl	35 - 70
LDL - CHOLESTEROL (CALCULATED)	92	mg/dl	Upto 100
VLDL - CHOLESTEROL (CALCULATED)	40	mg/dl	7 - 40
TOTAL / HDL - CHOLESTEROL RATIO	4.67		3.6 ± 0.7
LDL/HDL-CHOLESTEROL RATIO	2.56		2.1 ± 0.6

Method: Spectrophotometry.

***** END OF REPORT *****

Lipid Profile Comments:

All above biological reference intervals/ranges are in accordance to the recommendations of The National Cholesterol Education Program (NCEP) Adult Treatment Panel III (ATP III) Guidelines providing the most desirable targets of various circulating lipid fractions in the blood.
Lipid level measurements must be made following 9 to 12 hours of fasting, otherwise assay results might lead to erroneous interpretation.
NCEP recommends the assessment of 3 different samples drawn at intervals of 1 week for harmonizing biological variables that might be encountered in single assays.

Therapeutic target levels of lipids as per NCEP - ATP III recommendations

Total Cholesterol (mg/dL) <200 - Desirable, 200-239-Borderline high, >240- High.
HDL Cholesterol (mg/dL) <40 - Low, >60 - High.
LDL Cholesterol (mg/dL) <100 Optimal, (Primary Target of Therapy); 100-129- Near optimal/above optimal, 130-159-Borderline high, 160-189 High, >190 Very high.
Serum Triglycerides (mg/dL) <150 Normal, 150-199 Borderline high, 200-499 High, >500 very high.

NCEP recommends lowering of LDL Cholesterol as the primary therapeutic target; with lipid lowering agents, however, if triglycerides remain >200 mg/dL, after LDL goal is reached, set secondary goal for non-HDL cholesterol (total minus HDL) 30 mg/dL higher than LDL goal.

Comparison of LDL Cholesterol and Non-HDL Cholesterol Goals for Three Risk Categories

Risk Category	LDL Goal (mg/dL)	Non-HDL Goal (mg/dL)
CVD and CVD Risk Equivalent (10-year risk for CHD >20%)	<100	<130
Multiple (2+) Risk Factors and 10-year risk >20%	<130	<160
0-1 Risk Factor	<160	<190

Low HDL levels are an independent risk factor for occurrence of coronary artery disease.
When Triglyceride level is >400 mg/dL, Friedewald Equation is not applicable for calculation of LDL & VLDL. Hence the calculated values are not provided for such samples.

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THYROID FUNCTION TESTS

INVESTIGATIONS	RESULTS	NORMAL VALUES
TRIiodothyronine (T3)	127.03 ng/dl	Healthy Adults 60.0 – 181 ng/dl Pregnant Women 1 st Trimester 60.0 – 190 ng/dl 2 & 3 Trimester 90.0 – 260 ng/dl
THYROXINE (T4)	8.38 ug/dl	Healthy Adults 3.5 – 12.6 ug/dl Pregnant Women 1 st Trimester 8.8 – 18.2 ug/dl 2 & 3 Trimester 10.1 – 18.3 ug/dl
THYROID STIMULATING HORMONE (TSH)	2.20 μ IU/ml	Healthy Adults 0.25 – 5.5 μ IU/ml Pregnant Women 1 st Trimester 0.1 – 2.5 μ IU/ml 2 nd Trimester 0.2 – 3.0 μ IU/ml 3 rd Trimester 0.3 – 3.0 μ IU/ml

Method: CHEMILUMINESCENCE.

***** END OF REPORT *****

Guidelines of American Thyroid association for the diagnosis and management of thyroid disease during pregnancy

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THYROID PANEL TT3, TT4 & TSH

Primary malfunction of the thyroid gland may result in excessive (hyper) or below normal (hypo) release of T3 or T4. In addition, as TSH directly affects thyroid function, malfunction of the pituitary or the hypothalamus influences the thyroid gland activity. Disease in any portion of the thyroid- pituitary-hypothalamus system may influence the levels of T3 and T4 in the blood. In primary hypothyroidism, TSH levels are significantly elevated, while in secondary and tertiary hypothyroidism, TSH levels may be low. In addition, in the Euthyroid Sick Syndrome, multiple alterations in serum thyroid function test findings have been recognized in patients with a wide variety of nonthyroidal illness (NTI) without evidence of preexisting thyroid or hypothalamic – pituitary disease. Thyroid Binding Globulin (TBG) concentrations remain relatively constant in healthy individuals. However, pregnancy excess estrogens, androgens, anabolic steroids and glucocorticoids are known to alter TBG levels and may cause false thyroid values for Total T3 and T4 tests.

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<u>INVESTIGATIONS</u>	<u>RESULTS</u>	<u>UNITS</u>	<u>BIOLOGICAL REFERENCE INTERVAL</u>
VITAMIN - B12	91.41	pg/mL	120 - 914

***** END OF REPORT *****

Method: Chemiluminescence.

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