Dr. Vinay Chopra
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Dr. Yugam Chopra
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CEO & Consultant Pathologist

NAME	**: Mrs. RITU**		
AGE/ GENDER	: 34 YRS/FEMALE	**PATIENT ID**	: 1545320
COLLECTED BY	:	**REG. NO./LAB NO.**	**: 012407110006**
REFERRED BY	:	**REGISTRATION DATE**	: 11/Jul/2024 08:10 AM
BARCODE NO.	: 01512902	**COLLECTION DATE**	: 11/Jul/2024 08:36AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 11/Jul/2024 10:12AM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

CLINICAL CHEMISTRY/BIOCHEMISTRY

LIPID PROFILE : BASIC

Test Name	Value	Unit	Biological Reference interval
CHOLESTEROL TOTAL: SERUM *by CHOLESTEROL OXIDASE PAP*	155.45	mg/dL	OPTIMAL: < 200.0 BORDERLINE HIGH: 200.0 - 239.0 HIGH CHOLESTEROL: > OR = 240.0
TRIGLYCERIDES: SERUM ***by GLYCEROL PHOSPHATE OXIDASE (ENZYMATIC)***	**349.2^{H}**	**mg/dL**	**OPTIMAL: < 150.0** **BORDERLINE HIGH: 150.0 - 199.0** **HIGH: 200.0 - 499.0** **VERY HIGH: > OR = 500.0**
HDL CHOLESTEROL (DIRECT): SERUM *by SELECTIVE INHIBITION*	33.81	mg/dL	LOW HDL: < 30.0 BORDERLINE HIGH HDL: 30.0 - 60.0 HIGH HDL: > OR = 60.0
LDL CHOLESTEROL: SERUM *by CALCULATED, SPECTROPHOTOMETRY*	51.8	mg/dL	OPTIMAL: < 100.0 ABOVE OPTIMAL: 100.0 - 129.0 BORDERLINE HIGH: 130.0 - 159.0 HIGH: 160.0 - 189.0 VERY HIGH: > OR = 190.0
NON HDL CHOLESTEROL: SERUM *by CALCULATED, SPECTROPHOTOMETRY*	121.64	mg/dL	OPTIMAL: < 130.0 ABOVE OPTIMAL: 130.0 - 159.0 BORDERLINE HIGH: 160.0 - 189.0 HIGH: 190.0 - 219.0 VERY HIGH: > OR = 220.0
VLDL CHOLESTEROL: SERUM ***by CALCULATED, SPECTROPHOTOMETRY***	**69.84^{H}**	**mg/dL**	**0.00 - 45.00**
TOTAL LIPIDS: SERUM *by CALCULATED, SPECTROPHOTOMETRY*	660.1	mg/dL	350.00 - 700.00
CHOLESTEROL/HDL RATIO: SERUM ***by CALCULATED, SPECTROPHOTOMETRY***	**4.6^{H}**	**RATIO**	**LOW RISK: 3.30 - 4.40** **AVERAGE RISK: 4.50 - 7.0** **MODERATE RISK: 7.10 - 11.0** **HIGH RISK: > 11.0**
LDL/HDL RATIO: SERUM	1.53	RATIO	LOW RISK: 0.50 - 3.0

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Test Name	Value	Unit	Biological Reference interval
by CALCULATED, SPECTROPHOTOMETRY			MODERATE RISK: 3.10 - 6.0 HIGH RISK: > 6.0
TRIGLYCERIDES/HDL RATIO: SERUM ***by CALCULATED, SPECTROPHOTOMETRY***	**10.33^{H}**	**RATIO**	**3.00 - 5.00**

INTERPRETATION:

1.Measurements in the same patient can show physiological& analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL & LDL Cholesterol.
2. As per NLA-2014 guidelines, all adults above the age of 20 years should be screened for lipid status. Selective screening of children above the age of 2 years with a family history of premature cardiovascular disease or those with at least one parent with high total cholesterol is recommended.
3. Low HDL levels are associated with increased risk for Atherosclerotic Cardiovascular disease (ASCVD) due to insufficient HDL being available to participate in reverse cholesterol transport, the process by which cholesterol is eliminated from peripheral tissues.
4. NLA-2014 identifies Non HDL Cholesterol (an indicator of all atherogeniclipoproteins such as LDL , VLDL, IDL, Lpa, Chylomicron remnants) along with LDL-cholesterol as co- primary target for cholesterol lowering therapy. Note that major risk factors can modify treatment goals for LDL &Non HDL.
5. Additional testing for Apolipoprotein B, hsCRP,Lp(a) & LP-PLA2 should be considered among patients with moderate risk for ASCVD for risk refinement

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Test Name	Value	Unit	Biological Reference interval

URIC ACID

URIC ACID: SERUM	5.4	mg/dL	2.50 - 6.80

by URICASE - OXIDASE PEROXIDASE

INTERPRETATION:-

1.GOUT occurs when high levels of Uric Acid in the blood cause crystals to form & accumulate around a joint.
2.Uric Acid is the end product of purine metabolism . Uric acid is excreted to a large degree by the kidneys and to a smaller degree in the intestinal tract by microbial degradation.

INCREASED:-

(A).DUE TO INCREASED PRODUCTION:-

1.Idiopathic primary gout.
2.Excessive dietary purines (organ meats,legumes,anchovies, etc).
3.Cytolytic treatment of malignancies especially leukemais & lymphomas.
4.Polycythemai vera & myeloid metaplasia.
5.Psoriasis.
6.Sickle cell anaemia etc.

(B).DUE TO DECREASED EXCREATION (BY KIDNEYS)

1.Alcohol ingestion.
2.Thiazide diuretics.
3.Lactic acidosis.
4.Aspirin ingestion (less than 2 grams per day).
5.Diabetic ketoacidosis or starvation.
6.Renal failure due to any cause etc.

DECREASED:-

(A).DUE TO DIETARY DEFICIENCY

1.Dietary deficiency of Zinc, Iron and molybdenum.
2.Fanconi syndrome & Wilsons disease.
3.Multiple sclerosis .
4.Syndrome of inappropriate antidiuretic hormone (SIADH) secretion & low purine diet etc.

(B).DUE TO INCREASED EXCREATION

1.Drugs:-Probenecid , sulphinpyrazone, aspirin doses (more than 4 grams per day), corticosterroids and ACTH, anti-coagulants and estrogens etc.

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Test Name	Value	Unit	Biological Reference interval

ENDOCRINOLOGY

BETA HCG - TOTAL (QUANTITATIVE): MATERNAL

BETA HCG TOTAL, PREGNANCY MATERNAL: SERUM	< 1.20	mIU/mL	< 5.0

by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)

INTERPRETATION:

MEN:	mIU/ml	< 2.0
NON PREGNANT PRE-MENOPAUSAL WOMEN:	mIU/ml	< 5.0
MENOPAUSAL WOMEN:	mIU/ml	< 7.0
BETA HCG EXPECTED VALUES IN ACCORDANCE TO WEEKS OF GESTATIONAL AGE		
WEEKS OF GESTATION	Unit	Value
4-5	mIU/ml	1500 -23000
5-6	mIU/ml	3400 - 135300
6-7	mIU/ml	10500 - 161000
7-8	mIU/ml	18000 - 209000
8-9	mIU/ml	37500 - 219000
9-10	mIU/ml	42800 - 218000
10-11	mIU/ml	33700 - 218700
11-12	mIU/ml	21800 - 193200
12-13	mIU/ml	20300 - 166100
13-14	mIU/ml	15400 - 190000
2rd TRIMESTER	mIU/ml	2800 - 176100
3rd TRIMESTER	mIU/ml	2800 - 144400

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Test Name	Value	Unit	Biological Reference interval

1.hCG is a Glycoprotein with alpha and beta chains. Beta subunit is specific to hCG.
2.It is largely secreted by trophoblastic tissue. Small amounts may be secreted by fetal tissues and by the adult ant pituitary.
INCREASED :
1.Pregnancy
2.Gestationalsite & Non gestational trophoblastic neoplasia.
3.In mixed germ cell tumors.

SIGNIFICANTLY HIGHER THAN EXPECTED LEVEL:
1.Multiple pregnancies & High risk molar pregnancies are usually associated with levels in excess of one lac mIU/ml.
2.Erythroblastosis fetalis & Downs syndrome.

DECREASED:
1.Ectopic pregnancy.
2.Intra-uterine fetal death.

NOTE:
1.The test becomes positive 7-9 days after the midcycle surge that precedes ovulation (time of blastocyst implantation). Blood levels rise rapidly after this and double every 1.4 - 2 days.
2.Peak values are usually seen at 60-80 days of LMP. The levels then begin to taper and ebb out around the 20th week. These low levels are then maintained throughout pregnancy.
3.Doubling time: In intra-uterine pregnancy, serum hCG levels increase by approximately 66% every 48 hrs.Inappropriately rising serum hCG levels are suggestive of dying or ectopic pregnancy.

CAUTION:
Spuriously high levels (Phantom hCG) may be seen in presence of heterophilic antibodies (found in some normal people). If persistently raised levels are seen in a non-pregnant patient with no evidence of other obvious causes for such an increase a urine hCG assay may help confirm presence of the heterophile antibodies.

*** End Of Report ***

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