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NAME	**: Mrs. RANJU ABROL**		
AGE/ GENDER	: 51 YRS/FEMALE	**PATIENT ID**	: 1645675
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012410170017**
REFERRED BY	:	**REGISTRATION DATE**	: 17/Oct/2024 09:36 AM
BARCODE NO.	: 01519036	**COLLECTION DATE**	: 17/Oct/2024 09:44AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 17/Oct/2024 10:48AM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

CLINICAL CHEMISTRY/BIOCHEMISTRY

GLUCOSE FASTING (F)

GLUCOSE FASTING (F): PLASMA *by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD)*	**130.11^{H}**	**mg/dL**	**NORMAL: < 100.0** **PREDIABETIC: 100.0 - 125.0** **DIABETIC: > 0R = 126.0**

INTERPRETATION

IN ACCORDANCE WITH AMERICAN DIABETES ASSOCIATION GUIDELINES:

1. A fasting plasma glucose level below 100 mg/dl is considered normal.
2. A fasting plasma glucose level between 100 - 125 mg/dl is considered as glucose intolerant or prediabetic. A fasting and post-prandial blood test (after consumption of 75 gms of glucose) is recommended for all such patients.
3. A fasting plasma glucose level of above 125 mg/dl is highly suggestive of diabetic state. A repeat post-prandial is strongly recommended for all such patients. A fasting plasma glucose level in excess of 125 mg/dl on both occasions is confirmatory for diabetic state.

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Test Name	Value	Unit	Biological Reference interval
	LIPID PROFILE : BASIC		
CHOLESTEROL TOTAL: SERUM *by CHOLESTEROL OXIDASE PAP*	181.03	mg/dL	OPTIMAL: < 200.0 BORDERLINE HIGH: 200.0 - 239.0 HIGH CHOLESTEROL: > OR = 240.0
TRIGLYCERIDES: SERUM *by GLYCEROL PHOSPHATE OXIDASE (ENZYMATIC)*	143.29	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*	48.53	mg/dL	LOW HDL: < 30.0 BORDERLINE HIGH HDL: 30.0 - 60.0 HIGH HDL: > OR = 60.0
LDL CHOLESTEROL: SERUM *by CALCULATED, SPECTROPHOTOMETRY*	103.84	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***	**132.5^{H}**	**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*	28.66	mg/dL	0.00 - 45.00
TOTAL LIPIDS: SERUM *by CALCULATED, SPECTROPHOTOMETRY*	505.35	mg/dL	350.00 - 700.00
CHOLESTEROL/HDL RATIO: SERUM *by CALCULATED, SPECTROPHOTOMETRY*	3.73	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 *by CALCULATED, SPECTROPHOTOMETRY*	2.14	RATIO	LOW RISK: 0.50 - 3.0 MODERATE RISK: 3.10 - 6.0 HIGH RISK: > 6.0

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Test Name	Value	Unit	Biological Reference interval
TRIGLYCERIDES/HDL RATIO: SERUM ***by CALCULATED, SPECTROPHOTOMETRY***	**2.95^{L}**	**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
UREA			
UREA: SERUM *by UREASE - GLUTAMATE DEHYDROGENASE (GLDH)*	39.17	mg/dL	10.00 - 50.00

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Test Name	Value	Unit	Biological Reference interval
CREATININE			
CREATININE: SERUM *by ENZYMATIC, SPECTROPHOTOMETRY*	1.03	mg/dL	0.40 - 1.20

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Test Name	Value	Unit	Biological Reference interval

CREATININE PHOSPHOKINASE-MB (CPK-MB)

CPK-MB - SERUM	0.78	ng/mL	0.0 - 5.0

by EFIA (ENZYM FLUORESCENT IMMUNOASSAY)

Interpretation:-

1.Alternative name of Creatine Kinase (CK) is Creatine phospho-kinase(CPK).
2.Creatine Kinase (CK) is a dimeric enzyme composed of two types of monomer sib-units (i.e. M-Muscular & B-Brain),which combine to form three distict CK isoenzymes.
a).CK-BB(CK-I), is produced primarily by brain , lungs and smooth muscles , and enters the blood only on injury to these organs like cerebrovascular accidents or pulmonary infarctions.
b).CK-MB (CK-II), is produced primarily by heart muscle;
c).CK-MM (CK-III) , is produced primarily by skeletal muscle.
3).Normally very little CK is found circulating in the blood. Elevated levels indicate damage to either muscle or brain possibly from a myocardial infarction, muscle disease, or stroke.
4).CK levels are reduced in first half of pregnancy, and increased in second half of pregnancy.

Increased:-
Physiological:-
1.Strenuous physical activity .
2.New Born.
Pathological :-
1.Myocardial & pulmonary infarction
2**.** Accident and recent surgery.
3. Drugs:- Statins.
4.Convulsions & brain tumour.
5. Myopathies
6.Malignant hyperthermia
7.Hypothyroidism & Hyperthyroidism

5).CK-MB (CK-II) levels increase significantly 4-6 hours following a myocardial infaction and peak at around 12-24 hours after the infarct. The levels return to normal , in case of no further myocarial damage, after 24 to 48 hours . Hence the increased levels of CK-MB along with elevated levels of total CK is a good indicator of myocardial infarction.
6).For diagnosis of MI with high sensitivity and specificity , serial sampling over a period of 8 to 12 hours is required . For accurate diagnosis of myocardial infarction, CK-MB activity along with total CK should be measured. If the total CK activity is raised and CK-MB contributes mare than 6% of the total activity, then myocardial infarction is considered highly probable.

*** End Of Report ***

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