

Patient Name : Mr. DEMO

Patient Code : 169960554379



Gender/Age : Male / 25 Year

Bill No. : LAB1048

Referred by : SELF

Received Date : 08-12-2023 04:47 PM

Collection At :

Report Date : 08-12-2023 05:03 PM

**BIOCHEMISTRY REPORT****KIDNEY FUNCTION TEST(KFT)**

Test	Result	Unit	Normal Range
Urea	12	mg/dl	10.0 - 45.0
Serum Creatinine	0.73	mg/dL	0.70 - 1.30
Uric Acid	3.8	mg/dl	3.6 - 7.7
Sodium	<b>120</b>	mmol/L	135 - 146
Potassium	3.8	mmol/L	3.5 - 5.5
Calcium	8.9	mg/dl	8.5 - 10.7
Blood Urea Nitrogen-BUN	<b>6</b>	mg/dl	7 - 20


**Interpretation :**


Kidney function tests help to screen the individual for renal disease and to determine the extent or progression of renal disease. These tests also aid in determining drug dosage for drugs excreted through the kidneys. The clinical syndrome resulting from decreased renal function and azotemia is called uremia. Renal azotemia: glomerular nephritis and chronic pyelonephritis. Prerenal azotemia: severe dehydration, hemorrhagic shock, and excessive protein intake. Post renal azotemia: urethral stones or tumors and prostatic obstructions. Measurement of urea in dialysis fluids is widely used in assessing the adequacy of renal replacement therapy.


In these prerenal situations, the plasma creatinine concentration may be normal. In obstructive post renal conditions, both plasma creatinine and urea concentrations will be increased, although there is often a greater increase in plasma urea than creatinine because of the increased back diffusion. These considerations give rise to the principal clinical utility of plasma urea, which lies in its measurement in conjunction with that of plasma creatinine and subsequent calculation of the urea nitrogen/creatinine ratio. This ratio has been used as a crude discriminator between prerenal and postrenal azotemia. Significantly lower ratios usually denote (1) acute tubular necrosis, (2) low protein intake, (3) starvation, or (4) severe liver disease (decreased urea synthesis). So even though blood urea is not an excellent marker of renal dysfunction as it rises quite late in the dysfunction and its rise is also not exclusive to kidney dysfunction, but for practical purposes serum urea level is still one of the most ordered test and forms an important part of the kidney function test.

Concentrations in excess of 6.0 mg/dL at 32 weeks gestation have been noted to be associated with a high perinatal mortality rate.



  
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## LIVER FUNCTION TEST (LFT)


Test	Result	Unit	Normal Range
TOTAL BILIRUBIN Method: Serum, Jendrassik Grof	0.3	mg/dl	0.1 -1.2
DIRECT BILIRUBIN Method: Serum, Diazotization	0.3	mg/dl	0.0 - 0.3
SGPT (ALT) Method: Serum, UV with P5P, IFCC 37 degree	45	U/L	0 - 50
SGOT (AST) Method: UV with P5P, IFCC 37 degree	43	U/L	0 - 50
ALKALINE PHOSPHATASE Method: DGKC	29	U/L	30 - 120
TOTAL PROTEIN Method: Serum, Biuret, reagent blank end point	8	g/dl	6.0 - 8.0
SERUM ALBUMIN Method: Serum, Bromocresol green	3.6	g/dl	3.2 - 4.6
SERUM GLOBULIN Method: Serum, Calculated	4.4	g/dl	1.8 - 3.6
A/G RATIO Method: Serum, Calculated	0.82		1.2 - 2.2
Gamma Glutamyl Transferase-Serum Method: Kinetic	17	IU/L	15 - 73


## NOTE :


In known cases of Chronic Liver disease due to Viral Hepatitis B & C, Alcoholic liver disease or Non alcoholic fatty liver disease, Enhanced liver fibrosis (ELF) test may be used to evaluate liver fibrosis.



  
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**HAEMATOLOGY REPORT**


**COMPLETE BLOOD COUNT**

Test	Result	Unit	Normal Range
Haemoglobin	13	gm/dL	12.0 - 16.0
Total WBC Count	4500	cell/cu.mm	4000 - 10000
RBC Count	4.6	mil/cu.mm	4.5 - 5.5
<b>RBC INDICES</b>			
Hematocrit HCT	45	%	40 - 50
Mean Corp Volume MCV	98	fL	83 - 101
Mean Corp Hb MCH	28	pg	27 - 32
Mean Corp Hb Conc MCHC	<b>29</b>	gm/dL	31.5 - 34.5
RDW-CV	14	%	11.6 - 14.0
RDW-SD	<b>36</b>	fL	37.0 - 54.0
Platelet Count	1.6	lac/cmm	1.5 - 4.5
<b>Platelet Indices</b>			
MPV	12	fL	9.0 - 13.0
PDW-SD	10	fL	9.9 - 17.0
PDW-CV	38	%	37.8 - 46.3
PCT	0.18	%	0.17 - 0.35
P-LCR	14	%	13.0 - 43.0
<b>DIFFERENTIAL LEUCOCYTE COUNT</b>			
Neutrophils	45	%	40 - 80
Lymphocytes	23	%	20 - 40
Eosinophils	1	%	01 - 06
Monocytes	2	%	02 - 10
Basophils	<b>29</b>	%	01 - 02
<b>Absolute Differential Count</b>			
Absolute Neutrophils Coun	2025	/cumm	2000 - 7000
Absolute Lymphocyte Count	1035	/cumm	1000 - 3000
Absolute Eosinophil Count	45	/cumm	40 - 440
Absolute Monocyte Count	<b>90</b>	/cumm	200 - 1000



  
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**\*25 - Hydroxy Vitamin D**

Test	Result	Unit	Normal Range
*25 - Hydroxy Vitamin D-Serum	<b>35</b>	ng/mL	Deficiency - < 20 Insufficiency - 20 - 30 Sufficiency - 30 - 100 Toxicity - >100


\*25 OH Vitamin D is total of Vitamin D in Bone and mineral metabolism was recognized from its first identification as a factor that could cure rickets. However, Vitamin D is now recognized as a prohormone which has multiple roles in maintaining optimal health.\*Vitamin D toxicity is a recognized problem but a rare occurrence. Instead, a recent growing public health problem is Vitamin D insufficiency.

**LIPID PROFILE**

Test	Result	Unit	Normal Range
<b>LIPID PROFILE</b>			
Total Cholesterol	140	mg/dl	130 - 200
Triglycerides	26	mg/dl	25 - 200
HDL Cholesterol	38	mg/dl	35 - 80
LDL Cholesterol	96.80	mg/dl	85 - 130
VLDL Cholesterol	<b>5.20</b>	mg/dl	5 - 40
LDL / HDL	2.55	mg/dl	1.5 - 3.5
Total Cholesterol / HDL	3.68	mg/dl	3.5 - 5
TG / HDL	<b>0.68</b>	mg/dl	3.1 - 6.0
Non-HDL cholesterol	<b>102.00</b>	mg/dl	130 - 159

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. 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. \*Result rechecked and verified for abnormal cases.



  
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**Complete Urine Analysis (CUE)**

Test	Result	Unit	Normal Range
Urobilinogen	NILL	mg/dl	Nil
Yeast Cell	NILL	mg/dl	Nil

**PHYSICAL EXAMINATION**


Colour	Dark Yellow	.	Straw to light amber
Appearance	Watery	.	Clear

**CHEMICAL EXAMINATION**


Glucose	Negative	mg/dl	Negative
Protein	Negative	mg/dl	Negative
Bilirubin (Bile)	Negative	mg/dl	Negative
Ketone Bodies	Negative	mg/dl	Negative
Specific gravity	1.035	.	1.001 - 1.035
Reaction (pH)	<b>4.5</b>	.	4.6 - 8.0
Nitrites	NIL	mg/dl	Nil
Leukocyte Esterase	NIL	.	Nil

**MICROSCOPIC EXAMINATION**


PUS(WBC) Cells	05	/hpf	00-05
Red Blood Cells	NIL	/hpf	Nil
U.Epithelial Cells	05	/hpf	00-05
Casts	Occasional Hyaline cast	.	Occasional Hyaline cast
Crystals	Absent	.	Absent
Bacteria	Absent	.	Absent



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**\*Vitamin - B12**

Test	Result	Unit	Normal Range
*Vitamin - B12	140	pg/mL	120 - 914

\*Vitamin B12 is essential in DNA synthesis Hematopoiesis, and Central Nervous System integrity. \*Its absorption depends on the presence of intrinsic factor (IF) and may be due to lack of IF secretion by gastric mucosa. \*Vitamin B12 deficiency frequently causes Macrocytic Anemia, Glossitis, Pheripheral Neuropathy, Weakness, Hyperflexia, Ataxia, Loss of Proprioception, poor coordination and effective behavioural changes. A significant increase in RBC MCV may be an important indicator of Vitamin B12 deficiency.

**\*Glucose - Post Prandial(PP)**

Test	Result	Unit	Normal Range
*Glucose - Post Prandial(PP)	140	mg/dL	Normal: <140 Pre-Diabetic: 140-199 Diabetic: >=200


\*Glucose is the major carbohydrate present in blood. Its oxidation in the cells is the source of energy for the body. Increased levels of Glucose are found in Diabetes Mellitus, Hyperparathyroidism, Pancreatitis and renal failure Decreased levels are found in Insulinoma, Hypothyroidism, Hypopituitarism and extensive Liver disease. Biological Reference Interval: Source: American Diabetic Association, Diabetes Care 2018:41 (Suppl.1) S13-S27 Correlate Clinically.


**\*Glucose-Blood-Fasting**


Test	Result	Unit	Normal Range
*Glucose-Blood-Fasting	100	mg/dL	Normal < 100 Pre-diabetic 100-125 Diabetic >= 126

\*Glucose is the major carbohydrate present in blood. Its oxidation in the cells is the source of energy for the body. Increased levels of Glucose are found in Diabetes Mellitus, Hyperparathyroidism, Pancreatitis and renal failure. Decreased levels are found in Insulinoma, Hypothyroidism, Hypopituitarism and extensive Liver disease Biological Reference Interval : Source: American Diabetic Association, Diabetes Care 2018:41 (Suppl.1) S13-S27



  
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**Thyroid Pannel 2(FT3FT4TSH)**

Test	Result	Unit	Normal Range
<b>Thyroid Pannel 2(FT3FT4TSH)</b>			
Free T3	3.8	pg/mL	3.1 - 6.8
Free T4	<b>0.91</b>	ng/dL	0.93 - 1.70
TSH 3rd Generation	0.6	uIU/ml	0.4 -6.0


**BLOOD GROUP**


Test	Result	Unit	Normal Range
<b>BLOOD GROUP</b>			
ABO System	"0"	.	
Rh Typing	"POSITIVE"	.	


**HIV**

Test	Result	Unit	Normal Range
HIV	NON REACTIVE	mg/dL	NON REACTIVE



  
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**\*Glycosylated Hemoglobin(GHb/HbA1c)**

Test	Result	Unit	Normal Range
*Glycosylated Hemoglobin(GHb/HbA1c)	5.8	%	<5.7 Non diabetic, 5.7 - 6.4 Borderline diabetic, >6.4 Diabetic
*Mean Blood Glucose	119.76	mg/dL	90 - 120 : Excellent Control 121 - 150 : Good Control 151 - 180 : Average Control 181 - 210 : Action Suggested >211 :Panic Value

HbA1c is an indicator of glycemic control. HbA1c represents average Glycemia over the past six to eight weeks. Glycation of Hemoglobin occurs over the entire 120 day life span of the Red Blood Cell, but within this 120 days. Clinical studies suggest that a patient in stable control will have 50% of their HbA1c formed in the month before sampling, 25% in the month before that, and the remaining 25% in months two to four. Mean Plasma Glucose mg/dL =  $28.7 \times A1C - 46.7$ . Correlation between HbA1c and Mean Plasma Glucose (MPG) is not "perfect" but rather only this means that to predict or estimate average glucose from HbA1c or vice-versa is not "perfect" but gives a good working ballpark estimate. Afternoon and evening results correlate more closely to HbA1c than morning results, perhaps because morning fasting glucose levels vary much more than daytime Glucose levels, which are easier to predict and control. As per IFCC recommendations 2007, HbA1c being reported as above maintaining traceability to both IFCC (mmol/mol) & NGSP (%) units.


**Prothrombin Time (PT)**

Test	Result	Unit	Normal Range
<b>Prothrombin Time (PT)</b>			
PT-Patient Value	11	Sec	11 - 17
PT- Mean Control Value	2	Sec	.
PT-Ratio	3	.	.
PT-INR	<b>5.5</b>	.	0.9 - 1.2

\*The test measures the clotting time of Plasma with addition of tissue Thromboplastin and so indicates the overall efficiency of the extrinsic pathway. \*The Prothrombin Time may be shortened during acute inflammatory conditions which are accompanied by increase in Fibrinogen levels and also by agents such as Antihistaminics, Butabarbital, Phenobarbital, Caffeine, Oral Contraceptives and Vit K. \*The Prothrombin Time may be prolonged by Corticosteroids, EDTA, Asparaginase, Clofibrate, Ethanol, Tetracycline, Aspirin and anticoagulants like Heparin and Warfarin. \*PT Ratio = PT Patient/PT mean control value INR = (PT ratio)<sup>ISI</sup> To produce valid results for Hemostasis / Thrombosis tests and factor assays, specimen integrity is crucial and must be maintained. Due to extreme sensitivity of the test, pre-analytical errors needs to be ruled out for confirmation of abnormal test results.

\*\*\*\*\* End of Report \*\*\*\*\*



  
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