Name	: **Mr. MURALI KB**		
PID No.	: MED410010100	**Register On**	: 11/05/2024 9:47 AM
SID No.	: 712414423	**Collection On**	: 11/05/2024 10:04 AM
Age / Sex	: 51 Year(s) / Male	**Report On**	: 11/05/2024 4:09 PM
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Investigation	Observed Value	Unit	Biological Reference Interval

IMMUNOHAEMATOLOGY

BLOOD GROUPING AND Rh TYPING   'B' 'Negative'
(EDTA Blood/*Agglutination*)

Remark: Test to be confirmed by gel method.

Mr.S.Mohan Kumar
Sr.LabTechnician

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Consultant Pathologist
KMC No: 86542

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HAEMATOLOGY

Complete Blood Count With - ESR

Haemoglobin	16.0	g/dL	13.5 - 18.0
(EDTA Blood/*Spectrophotometry*)			

INTERPRETATION: Haemoglobin values vary in Men, Women & Children. Low haemoglobin values may be due to nutritional deficiency, blood loss, renal failure etc. Higher values are often due to dehydration, smoking , high altitudes , hypoxia etc.

PCV (Packed Cell Volume) / Haematocrit	47.3	%	42 - 52
(EDTA Blood/*Derived*)			
RBC Count	**6.08**	mill/cu.mm	4.7 - 6.0
(EDTA Blood/*Automated Blood cell Counter*)			
MCV (Mean Corpuscular Volume)	78.0	fL	78 - 100
(EDTA Blood/*Derived from Impedance*)			
MCH (Mean Corpuscular Haemoglobin)	**26.4**	pg	27 - 32
(EDTA Blood/*Derived*)			
MCHC (Mean Corpuscular Haemoglobin concentration)	33.9	g/dL	32 - 36
(EDTA Blood/*Derived*)			
RDW-CV	13.7	%	11.5 - 16.0
(*Derived*)			
RDW-SD	**37.40**	fL	39 - 46
(*Derived*)			
Total WBC Count (TC)	9490	cells/cu.mm	4000 - 11000
(EDTA Blood/*Derived from Impedance*)			
Neutrophils	55	%	40 - 75
(Blood/*Impedance Variation & Flow Cytometry*)			
Lymphocytes	32	%	20 - 45
(Blood/*Impedance Variation & Flow Cytometry*)			

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Eosinophils (Blood/*Impedance Variation & Flow Cytometry*)	**08**	%	01 - 06
Monocytes (Blood/*Impedance Variation & Flow Cytometry*)	05	%	01 - 10
Basophils (Blood/*Impedance Variation & Flow Cytometry*)	00	%	00 - 02
Absolute Neutrophil count (EDTA Blood/*Impedance Variation & Flow Cytometry*)	5.22	10^3 / µl	1.5 - 6.6
Absolute Lymphocyte Count (EDTA Blood/*Impedance Variation & Flow Cytometry*)	3.04	10^3 / µl	1.5 - 3.5
Absolute Eosinophil Count (AEC) (EDTA Blood/*Impedance Variation & Flow Cytometry*)	**0.76**	10^3 / µl	0.04 - 0.44
Absolute Monocyte Count (EDTA Blood/*Impedance Variation & Flow Cytometry*)	0.47	10^3 / µl	< 1.0
Absolute Basophil count (EDTA Blood/*Impedance Variation & Flow Cytometry*)	0.00	10^3 / µl	< 0.2
Platelet Count (EDTA Blood/*Derived from Impedance*)	200	10^3 / µl	150 - 450
MPV (Blood/*Derived*)	12.3	fL	7.9 - 13.7
PCT	0.25	%	0.18 - 0.28
ESR (Erythrocyte Sedimentation Rate) (Citrated Blood/*Automated ESR analyser*)	15	mm/hr	< 20

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Investigation	Observed Value	Unit	Biological Reference Interval
BIOCHEMISTRY			
Liver Function Test			
Bilirubin(Total) (Serum/*Diazotized Sulfanilic Acid*)	0.6	mg/dL	0.1 - 1.2
Bilirubin(Direct) (Serum/*Diazotized Sulfanilic Acid*)	0.2	mg/dL	0.0 - 0.3
Bilirubin(Indirect) (Serum/*Derived*)	0.40	mg/dL	0.1 - 1.0
Total Protein (Serum/*Biuret*)	6.7	gm/dl	6.0 - 8.0
Albumin (Serum/*Bromocresol green*)	4.0	gm/dl	3.5 - 5.2
Globulin (Serum/*Derived*)	2.70	gm/dL	2.3 - 3.6
A : G Ratio (Serum/*Derived*)	1.48		1.1 - 2.2
INTERPRETATION: Remark : Electrophoresis is the preferred method			
SGOT/AST (Aspartate Aminotransferase) (Serum/*IFCC / Kinetic*)	40	U/L	5 - 40
SGPT/ALT (Alanine Aminotransferase) (Serum/*IFCC / Kinetic*)	**64**	U/L	5 - 41
Alkaline Phosphatase (SAP) (Serum/*PNPP / Kinetic*)	94	U/L	56 - 119
GGT(Gamma Glutamyl Transpeptidase) (Serum/*IFCC / Kinetic*)	**57**	U/L	< 55

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DIAGNOSTICS

Investigation	Observed Value	Unit	Biological Reference Interval
Lipid Profile			
Cholesterol Total (Serum/*Oxidase / Peroxidase method*)	**204**	mg/dL	Optimal: < 200 Borderline: 200 - 239 High Risk: >= 240
Triglycerides (Serum/*Glycerol phosphate oxidase / peroxidase*)	**274**	mg/dL	Optimal: < 150 Borderline: 150 - 199 High: 200 - 499 Very High: >=500

INTERPRETATION: The reference ranges are based on fasting condition. Triglyceride levels change drastically in response to food, increasing as much as 5 to 10 times the fasting levels, just a few hours after eating. Fasting triglyceride levels show considerable diurnal variation too. There is evidence recommending triglycerides estimation in non-fasting condition for evaluating the risk of heart disease and screening for metabolic syndrome, as non-fasting sample is more representative of the `usual‿ circulating level of triglycerides during most part of the day.

Remark: Kindly correlate clinically

HDL Cholesterol (Serum/*Immunoinhibition*)	**33**	mg/dL	Optimal(Negative Risk Factor): >= 60 Borderline: 40 - 59 High Risk: < 40
LDL Cholesterol (Serum/*Calculated*)	116.2	mg/dL	Optimal: < 100 Above Optimal: 100 - 129 Borderline: 130 - 159 High: 160 - 189 Very High: >=190
VLDL Cholesterol (Serum/*Calculated*)	54.8	mg/dL	< 30
Non HDL Cholesterol (Serum/*Calculated*)	171.0	mg/dL	Optimal: < 130 Above Optimal: 130 - 159 Borderline High: 160 - 189 High: 190 - 219 Very High: >=220

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DIAGNOSTICS

Investigation	Observed Value	Unit	Biological Reference Interval

INTERPRETATION: 1.Non-HDL Cholesterol is now proven to be a better cardiovascular risk marker than LDL Cholesterol.
2.It is the sum of all potentially atherogenic proteins including LDL, IDL, VLDL and chylomicrons and it is the "new bad cholesterol" and is a co-primary target for cholesterol lowering therapy.

Investigation	Observed Value	Unit	Biological Reference Interval
Total Cholesterol/HDL Cholesterol Ratio (Serum/*Calculated*)	6.2		Optimal: < 3.3 Low Risk: 3.4 - 4.4 Average Risk: 4.5 - 7.1 Moderate Risk: 7.2 - 11.0 High Risk: > 11.0
Triglyceride/HDL Cholesterol Ratio (TG/HDL) (Serum/*Calculated*)	8.3		Optimal: < 2.5 Mild to moderate risk: 2.5 - 5.0 High Risk: > 5.0
LDL/HDL Cholesterol Ratio (Serum/*Calculated*)	3.5		Optimal: 0.5 - 3.0 Borderline: 3.1 - 6.0 High Risk: > 6.0

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DIAGNOSTICS

Investigation	Observed Value	Unit	Biological Reference Interval
Glycosylated Haemoglobin (HbA1c)			
HbA1C (Whole Blood/*HPLC)*	**8.1**	*%*	Normal: 4.5 - 5.6 Prediabetes: 5.7 - 6.4 Diabetic: >= 6.5

INTERPRETATION: If Diabetes - Good control : 6.1 - 7.0 % , Fair control : 7.1 - 8.0 % , Poor control >= 8.1 %

Remark: Kindly correlate clinically,

Estimated Average Glucose (Whole Blood*)*	185.77	mg/dl

INTERPRETATION: Comments

HbA1c provides an index of Average Blood Glucose levels over the past 8 - 12 weeks and is a much better indicator of long term glycemic control as compared to blood and urinary glucose determinations.

Conditions that prolong RBC life span like Iron deficiency anemia, Vitamin B12 & Folate deficiency, hypertriglyceridemia,hyperbilirubinemia,Drugs, Alcohol, Lead Poisoning, Asplenia can give falsely elevated HbA1C values.

Conditions that shorten RBC survival like acute or chronic blood loss, hemolytic anemia, Hemoglobinopathies, Splenomegaly,Vitamin E ingestion, Pregnancy, End stage Renal disease can cause falsely low HbA1c.

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DIAGNOSTICS

Investigation	Observed Value	Unit	Biological Reference Interval

BIOCHEMISTRY

Investigation	Observed Value	Unit	Biological Reference Interval
BUN / Creatinine Ratio	8.6		
Glucose Fasting (FBS) (Plasma - F/*GOD- POD)*	**155**	mg/dL	Normal: < 100 Pre Diabetic: 100 - 125 Diabetic: >= 126

INTERPRETATION: Factors such as type, quantity and time of food intake, Physical activity, Psychological stress, and drugs can influence blood glucose level.

Investigation	Observed Value	Unit	Biological Reference Interval
Urine sugar, Fasting (Urine - F*)*	Nil		Nil
Glucose Postprandial (PPBS) (Plasma - PP/*GOD - POD)*	**195**	mg/dL	70 - 140

INTERPRETATION:
Factors such as type, quantity and time of food intake, Physical activity, Psychological stress, and drugs can influence blood glucose level. Fasting blood glucose level may be higher than Postprandial glucose, because of physiological surge in Postprandial Insulin secretion, Insulin resistance, Exercise or Stress, Dawn Phenomenon, Somogyi Phenomenon, Anti- diabetic medication during treatment for Diabetes.

Investigation	Observed Value	Unit	Biological Reference Interval
Urine Sugar (PP-2 hours) (Urine - PP*)*	**Trace**		Negative
Blood Urea Nitrogen (BUN) (Serum/*Urease UV / derived)*	7.8	mg/dL	7.0 - 21
Creatinine (Serum/*Jaffe Kinetic)*	0.9	mg/dL	0.9 - 1.3

INTERPRETATION: Elevated Creatinine values are encountered in increased muscle mass, severe dehydration, Pre-eclampsia, increased ingestion of cooked meat, consuming Protein/ Creatine supplements, Diabetic Ketoacidosis, prolonged fasting, renal dysfunction and drugs such as cefoxitin ,cefazolin, ACE inhibitors ,angiotensin II receptor antagonists,N-acetylcyteine , chemotherapeutic agent such as flucytosine etc.

Investigation	Observed Value	Unit	Biological Reference Interval
Uric Acid (Serum/*Uricase/Peroxidase)*	5.1	mg/dL	3.5 - 7.2

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Investigation	Observed Value	Unit	Biological Reference Interval

IMMUNOASSAY

THYROID PROFILE / TFT

T3 (Triiodothyronine) - Total	1.42	ng/mL	0.4 - 1.81

(Serum/*Chemiluminescent Immunometric Assay (CLIA)*)

INTERPRETATION:
Comment :
Total T3 variation can be seen in other condition like pregnancy, drugs, nephrosis etc. In such cases, Free T3 is recommended as it is Metabolically active.

T4 (Thyroxine) - Total	6.97	μg/dL	4.2 - 12.0

(Serum/*Chemiluminescent Immunometric Assay (CLIA)*)

INTERPRETATION:
Comment :
Total T4 variation can be seen in other condition like pregnancy, drugs, nephrosis etc. In such cases, Free T4 is recommended as it is Metabolically active.

TSH (Thyroid Stimulating Hormone)	1.92	μIU/mL	0.35 - 5.50

(Serum/*Chemiluminescent Immunometric Assay (CLIA)*)

INTERPRETATION:
Reference range for cord blood - upto 20
1 st trimester: 0.1-2.5
2 nd trimester 0.2-3.0
3 rd trimester : 0.3-3.0
(Indian Thyroid Society Guidelines)
Comment :
1.TSH reference range during pregnancy depends on Iodine intake, TPO status, Serum HCG concentration, race, Ethnicity and BMI.
2.TSH Levels are subject to circadian variation, reaching peak levels between 2-4am and at a minimum between 6-10PM.The variation can be of the order of 50%,hence time of the day has influence on the measured serum TSH concentrations.
3.Values&amplt;0.03 μIU/mL need to be clinically correlated due to presence of rare TSH variant in some individuals.

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Investigation	Observed Value	Unit	Biological Reference Interval
IMMUNOASSAY			
Total PSA (Serum/*Chemiluminescent Immunometric Assay (CLIA)*)	0.88	ng/mL	Normal: 0.0 - 4.0 Inflammatory & Non Malignant conditions of Prostate & genitourinary system: 4.01 - 10.0 Suspicious of Malignant disease of Prostate: > 10.0

INTERPRETATION: REMARK : PSA alone should not be used as an absolute indicator of malignancy.

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Investigation	Observed Value	Unit	Biological Reference Interval
CLINICAL PATHOLOGY			
PHYSICAL EXAMINATION			
Colour (Urine/*Physical examination*)	Pale Yellow		Yellow to Amber
Volume (Urine/*Physical examination*)	25		ml
Appearance (Urine)	Clear		
CHEMICAL EXAMINATION			
pH (Urine)	6.5		4.5 - 8.0
Specific Gravity (Urine/*Dip Stick ¯ Reagent strip method*)	1.010		1.002 - 1.035
Protein (Urine/*Dip Stick ¯ Reagent strip method*)	Negative		Negative
Glucose (Urine)	Nil		Nil
Ketone (Urine/*Dip Stick ¯ Reagent strip method*)	Nil		Nil
Leukocytes (Urine)	Negative	leuco/uL	Negative
Nitrite (Urine/*Dip Stick ¯ Reagent strip method*)	Nil		Nil
Bilirubin (Urine)	Negative	mg/dL	Negative
Blood (Urine)	Nil		Nil

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Investigation	Observed Value	Unit	Biological Reference Interval
Urobilinogen (Urine/*Dip Stick⁻ Reagent strip method*)	Normal		Within normal limits
Urine Microscopy Pictures			
RBCs (Urine/*Microscopy)*	Nil	/hpf	NIL
Pus Cells (Urine/*Microscopy)*	2-3	/hpf	< 5
Epithelial Cells (Urine/*Microscopy)*	3-4	/hpf	No ranges
Others (Urine*)*	Nil		Nil

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-- End of Report --

Name	Mr.MURALI KB	ID	MED410010100
Age & Gender	51/MALE	Visit Date	11/05/2024
Ref Doctor Name	MediWheel		

ABDOMINO-PELVIC ULTRASONOGRAPHY

LIVER is normal in shape, size and has uniform echopattern.

No evidence of focal lesion or intrahepatic biliary ductal dilatation.

Hepatic and portal vein radicals are normal.

GALL BLADDER is partially distended.

PANCREAS has normal shape, size and uniform echopattern.

No evidence of ductal dilatation or calcification.

SPLEEN show normal shape, size and echopattern.

KIDNEYS move well with respiration and have normal shape, size and echopattern.

Cortico- medullary differentiations are well madeout.

No evidence of calculus or hydronephrosis.

	Bipolar length (cms)	Parenchymal thickness (cms)
Right Kidney	10.9	2.0
Left Kidney	9.9	1.9

URINARY BLADDER show normal shape and wall thickness.

It has clear contents.

Prevoid volume - 325cc   *Postvoid residual urine - 95cc*

PROSTATE shows normal shape, size and echopattern.

It measures 2.6 x 4.3 x 3.0cms and volume 17.4cc.

No evidence of ascites.

IMPRESSION:

➢ **SIGNIFICANT POSTVOID RESIDUAL URINE.**

CONSULTANT RADIOLOGISTS

DR. ANITHA ADARSH
MB/MS

DR. MOHAN B

Name	Mr. MURALI KB	ID	MED410010100
Age & Gender	51Y/M	Visit Date	May 11 2024 9:47AM
Ref Doctor	MediWheel		

X - RAY CHEST PA VIEW

Bilateral lung fields appear normal.

Cardiac size is within normal limits.

Bilateral hilar regions appear normal.

Bilateral domes of diaphragm and costophrenic angles are normal.

Visualised bones and soft tissues appear normal.

Impression: No significant abnormality detected.

DR. MOHAN. B
(DMRD, DNB, EDIR, FELLOW IN CARDIAC MRI)
CONSULTANT RADIOLOGIST