

Lab No. : SOD/11-03-2023/SR7391402
Patient Name : NIRAJ KUMAR
Age : 34 Y 0 M 14 D
Gender : M

Lab Add. : Newtown, Kolkata-700156
Ref Dr. : Dr.MEDICAL OFFICER
Collection Date: 11/Mar/2023 08:35AM
Report Date : 11/Mar/2023 02:56PM



Test Name	Result	Unit	Bio Ref. Interval	Method
SGOT/AST , GEL SERUM				
SGOT/AST	30.00	U/L	13-40 U/L	Modified IFCC
SODIUM, BLOOD , GEL SERUM				
SODIUM,BLOOD	141.00	mEq/L	132 - 146 mEq/L	ISE INDIRECT
GLUCOSE, FASTING , BLOOD, NAF PLASMA				
GLUCOSE,FASTING	102	mg/dL	Impaired Fasting-100-125 . Diabetes- >= 126. Fasting is defined as no caloric intake for at least 8 hours.	Gluc Oxidase Trinder

In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.

Reference :
ADA Standards of Medical Care in Diabetes – 2020. Diabetes Care Volume 43, Supplement 1.

CALCIUM, BLOOD

CALCIUM,BLOOD	9.70	mg/dL	8.7-10.4 mg/dL	Arsenazo III
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THYROID PANEL (T3, T4, TSH) , GEL SERUM

T3-TOTAL (TRI IODOTHYRONINE)	1.10	ng/ml	0.60-1.81 ng/ml	CLIA
T4-TOTAL (THYROXINE)	7.6	µg/dL	3.2-12.6 µg/dL	CLIA
TSH (THYROID STIMULATING HORMONE)	3.02	µIU/mL	0.55-4.78 µIU/mL	CLIA

Serum TSH levels exhibit a diurnal variation with the peak occurring during the night and the nadir, which approximates to 50% of the peak value, occurring between 1000 and 1600 hours.[1,2]

References:

- Bugalho MJ, Domingues RS, Pinto AC, Garrao A, Catarino AL, Ferreira T, Limbert E and Sobrinho L. Detection of thyroglobulin mRNA transcripts in peripheral blood of individuals with and without thyroid glands: evidence for thyroglobulin expression by blood cells. *Eur J Endocrinol* 2001;145:409-13.
- Bellantone R, Lombardi CP, Bossola M, Ferrante A, Princi P, Boscherini M et al. Validity of thyroglobulin mRNA assay in peripheral blood of postoperative thyroid carcinoma patients in predicting tumor recurrence varies according to the histologic type: results of a prospective study. *Cancer* 2001;92:2273-9.

BIOLOGICAL REFERENCE INTERVAL: [ONLY FOR PREGNANT MOTHERS]

Trimester specific TSH LEVELS during pregnancy:

FIRST TRIMESTER: 0.10 – 3.00 µ IU/mL

SECOND TRIMESTER: 0.20 -3.50 µ IU/mL

THIRD TRIMESTER : 0.30 -3.50 µ IU/mL


References:

- Erik K. Alexander, Elizabeth N. Pearce, Gregory A. Brent, Rosalind S. Brown, Herbert Chen, Chrysoula Dosiou,

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William A. Grobman, Peter Laurberg, John H. Lazarus, Susan J. Mandel, Robin P. Peeters, and Scott Sullivan. Thyroid. Mar 2017.315-389. <http://doi.org/10.1089/thy.2016.0457>
 2. Kalra S, Agarwal S, Aggarwal R, Ranabir S. Trimester-specific thyroid-stimulating hormone: An indian perspective. *Indian J Endocr Metab* 2018;22:1-4.

BILIRUBIN (DIRECT) , GEL SERUM				
BILIRUBIN (DIRECT)	0.10	mg/dL	<0.2 mg/dL	Vanadate oxidation
CREATININE, BLOOD , GEL SERUM				
CREATININE, BLOOD	0.91	mg/dL	0.7-1.3 mg/dL	Jaffe, alkaline picrate, kinetic
BILIRUBIN (TOTAL) , GEL SERUM				
BILIRUBIN (TOTAL)	0.60	mg/dL	0.3-1.2 mg/dL	Vanadate oxidation
SGPT/ALT , GEL SERUM				
SGPT/ALT	37.00	U/L	7-40 U/L	Modified IFCC
POTASSIUM, BLOOD , GEL SERUM				
POTASSIUM, BLOOD	3.90	mEq/L	3.5-5.5 mEq/L	ISE INDIRECT
*CHLORIDE, BLOOD , .				
CHLORIDE, BLOOD	105.00	mEq/L	99-109 mEq/L	ISE INDIRECT
PHOSPHORUS-INORGANIC, BLOOD , GEL SERUM				
PHOSPHORUS-INORGANIC, BLOOD	2.8	mg/dL	2.4-5.1 mg/dL	Phosphomolybdate/UV
TOTAL PROTEIN [BLOOD] ALB:GLO RATIO , .				
TOTAL PROTEIN	7.70	g/dL	5.7-8.2 g/dL	BIURET METHOD
ALBUMIN	4.8	g/dL	3.2-4.8 g/dL	BCG Dye Binding
GLOBULIN	2.90	g/dl	1.8-3.2 g/dl	Calculated
AG Ratio	1.66		1.0 - 2.5	Calculated
ALKALINE PHOSPHATASE , GEL SERUM				
ALKALINE PHOSPHATASE	96.00	U/L	46-116 U/L	IFCC standardization
UREA, BLOOD				
UREA, BLOOD	25.7	mg/dL	19-49 mg/dL	Urease with GLDH


Dr. SUPARBA CHAKRABARTI
 MBBS, MD(BIOCHEMISTRY)
 Consultant Biochemist



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BLOOD GROUP ABO+RH [GEL METHOD] , EDTA WHOLE BLOOD

ABO	B	Gel Card
RH	POSITIVE	Gel Card

TECHNOLOGY USED: GEL METHOD

ADVANTAGES :

- Gel card allows simultaneous forward and reverse grouping.
- Card is scanned and record is preserved for future reference.
- Allows identification of Bombay blood group.
- Daily quality controls are run allowing accurate monitoring.

Historical records check not performed.

CBC WITH PLATELET (THROMBOCYTE) COUNT , EDTA WHOLE BLOOD

HEMOGLOBIN	15.5	g/dL	13 - 17	PHOTOMETRIC
WBC	9.0	*10 ³ /μL	4 - 10	DC detection method
RBC	5.26	*10 ⁶ /μL	4.5 - 5.5	DC detection method
PLATELET (THROMBOCYTE) COUNT	158	*10 ³ /μL	150 - 450*10 ³ /μL	DC detection method/Microscopy

DIFFERENTIAL COUNT

NEUTROPHILS	64	%	40 - 80 %	Flowcytometry/Microscopy
LYMPHOCYTES	24	%	20 - 40 %	Flowcytometry/Microscopy
MONOCYTES	06	%	2 - 10 %	Flowcytometry/Microscopy
EOSINOPHILS	06	%	1 - 6 %	Flowcytometry/Microscopy
BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy

CBC SUBGROUP

HEMATOCRIT / PCV	46.2	%	40 - 50 %	Calculated
MCV	87.8	fl	83 - 101 fl	Calculated
MCH	29.6	pg	27 - 32 pg	Calculated
MCHC	33.7	gm/dl	31.5-34.5 gm/dl	Calculated
RDW - RED CELL DISTRIBUTION WIDTH	15.6	%	11.6-14%	Calculated
PDW-PLATELET DISTRIBUTION WIDTH	32.4	fL	8.3 - 25 fL	Calculated
MPV-MEAN PLATELET VOLUME	13.5		7.5 - 11.5 fl	Calculated

ESR (ERYTHROCYTE SEDIMENTATION RATE) , EDTA WHOLE BLOOD

1stHour	11	mm/hr	0.00 - 20.00 mm/hr	Westergren
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Dr Mansi Gulati
Consultant Pathologist
MBBS, MD, DNB (Pathology)



Lab No. : SR7391402

Name : NIRAJ KUMAR

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URINE ROUTINE ALL, ALL , URINE

PHYSICAL EXAMINATION

COLOUR PALE YELLOW
APPEARANCE SLIGHTLY HAZY

CHEMICAL EXAMINATION

pH	5.0	4.6 - 8.0	Dipstick (triple indicator method)
SPECIFIC GRAVITY	1.015	1.005 - 1.030	Dipstick (ion concentration method)
PROTEIN	NOT DETECTED	NOT DETECTED	Dipstick (protein error of pH indicators)/Manual
GLUCOSE	NOT DETECTED	NOT DETECTED	Dipstick(glucose-oxidase-peroxidase method)/Manual
KETONES (ACETOACETIC ACID, ACETONE)	NOT DETECTED	NOT DETECTED	Dipstick (Legals test)/Manual
BLOOD	NOT DETECTED	NOT DETECTED	Dipstick (pseudoperoxidase reaction)
BILIRUBIN	NEGATIVE	NEGATIVE	Dipstick (azo-diazo reaction)/Manual
UROBILINOGEN	NEGATIVE	NEGATIVE	Dipstick (diazonium ion reaction)/Manual
NITRITE	NEGATIVE	NEGATIVE	Dipstick (Griess test)
LEUCOCYTE ESTERASE	NEGATIVE	NEGATIVE	Dipstick (ester hydrolysis reaction)

MICROSCOPIC EXAMINATION

LEUKOCYTES (PUS CELLS)	0-1	/hpf	0-5	Microscopy
EPITHELIAL CELLS	0-1	/hpf	0-5	Microscopy
RED BLOOD CELLS	NOT DETECTED	/hpf	0-2	Microscopy
CAST	NOT DETECTED		NOT DETECTED	Microscopy
CRYSTALS	NOT DETECTED		NOT DETECTED	Microscopy
BACTERIA	NOT DETECTED		NOT DETECTED	Microscopy
YEAST	NOT DETECTED		NOT DETECTED	Microscopy

Note:

1. All urine samples are checked for adequacy and suitability before examination.
2. Analysis by urine analyzer of dipstick is based on reflectance photometry principle. Abnormal results of chemical examinations are confirmed by manual methods.
3. The first voided morning clean-catch midstream urine sample is the specimen of choice for chemical and microscopic analysis.
4. Negative nitrite test does not exclude urinary tract infections.
5. Trace proteinuria can be seen in many physiological conditions like exercise, pregnancy, prolonged recumbency etc.
6. False positive results for glucose, protein, nitrite, urobilinogen, bilirubin can occur due to use of certain drugs, therapeutic dyes, ascorbic acid, cleaning agents used in urine collection container.
7. Discrepancy between results of leukocyte esterase and blood obtained by chemical methods with corresponding pus cell and red blood cell count by microscopy can occur due to cell lysis.
8. Contamination from perineum and vaginal discharge should be avoided during collection, which may falsely elevate epithelial cell count and show presence of bacteria and/or yeast in the urine.

DR. NEHA GUPTA
MD, DNB (Pathology)
Consultant Pathologist



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URIC ACID, BLOOD , GEL SERUM

URIC ACID,BLOOD **7.90** mg/dL 3.5-7.2 mg/dL Uricase/Peroxidase

GLUCOSE, PP , BLOOD, NAF PLASMA

GLUCOSE,PP 119 mg/dL Impaired Glucose Tolerance-140 to 199.
Diabetes>= 200. Gluc Oxidase Trinder

The test should be performed as described by the WHO, using a glucose load containing the equivalent of 75-g anhydrous glucose dissolved in water. In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.

Reference :
ADA Standards of Medical Care in Diabetes – 2020. Diabetes Care Volume 43, Supplement 1.

URIC ACID, URINE, SPOT URINE

URIC ACID, SPOT URINE **14.00** mg/dL 37-92 mg/dL URICASE

ESTIMATED TWICE

[PDF Attached](#)

GLYCATED HAEMOGLOBIN (HBA1C) , EDTA WHOLE BLOOD

GLYCATED HEMOGLOBIN (HBA1C)	5.5	%	***FOR BIOLOGICAL REFERENCE INTERVAL DETAILS , PLEASE REFER TO THE BELOW MENTIONED REMARKS/NOTE WITH ADDITIONAL CLINICAL INFORMATION ***
HbA1c (IFCC)	36.0	mmol/mol	HPLC

Clinical Information and Laboratory clinical interpretation on Biological Reference Interval:

Low risk / Normal / non-diabetic : <5.7% (NGSP) / < 39 mmol/mol (IFCC)
Pre-diabetes/High risk of Diabetes : 5.7%- 6.4% (NGSP) / 39 - < 48 mmol/mol (IFCC)
Diabetics-HbA1c level : >/= 6.5% (NGSP) / > 48 mmol/mol (IFCC)

Analyzer used : Bio-Rad-VARIANT TURBO 2.0
Method : HPLC Cation Exchange

Recommendations for glycemc targets

- Ø Patients should use self-monitoring of blood glucose (SMBG) and HbA1c levels to assess glycemc control.
- Ø The timing and frequency of SMBG should be tailored based on patients' individual treatment, needs, and goals.
- Ø Patients should undergo HbA1c testing at least twice a year if they are meeting treatment goals and have stable glycemc control.
- Ø If a patient changes treatment plans or does not meet his or her glycemc goals, HbA1c testing should be done quarterly.
- Ø **For most adults who are not pregnant, HbA1c levels should be <7% to help reduce microvascular complications and macrovascular disease . Action suggested >8% as it indicates poor control.**
- Ø Some patients may benefit from HbA1c goals that are stringent.

Result alterations in the estimation has been established in many circumstances, such as after acute/ chronic blood loss, for example, after surgery, blood transfusions, hemolytic anemia, or high erythrocyte turnover; vitamin B₁₂/ folate deficiency, presence of chronic renal or liver disease; after administration of high-dose vitamin E / C; or erythropoietin treatment.

Reference: Glycated hemoglobin monitoring BMJ 2006; 333:586-8

References:

1. Chamberlain JJ, Rhinehart AS, Shaefer CF, et al. Diagnosis and management of diabetes: synopsis of the 2016 American Diabetes Association Standards of Medical Care in Diabetes. Ann Intern Med. Published online 1 March 2016. doi:10.7326/M15-3016.
2. Mosca A, Goodall I, Hoshino T, Jeppsson JO, John WG, Little RR, Miedema K, Myers GL, Reinauer H, Sacks DB, Weykamp CW. International Federation of Clinical Chemistry and Laboratory Medicine, IFCC Scientific Division. Global standardization of glycated hemoglobin measurement: the position of the IFCC Working Group. Clin Chem Lab Med. 2007;45(8):1077-1080.



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LIPID PROFILE , GEL SERUM

CHOLESTEROL-TOTAL	202.00	mg/dL	Desirable: < 200 mg/dL Borderline high: 200-239 mg/dL High: > or =240 mg/dL	Enzymatic
TRIGLYCERIDES	176.00	mg/dL	Normal:: < 150, BorderlineHigh::150-199, High:: 200-499, VeryHigh::>500	GPO-Trinder
HDL CHOLESTEROL	41.00	mg/dl	< 40 - Low 40-59- Optimum 60 - High	Elimination/catalase
LDL CHOLESTEROL DIRECT	144.0	mg/dL	OPTIMAL : <100 mg/dL, Near optimal/ above optimal : 100-129 mg/dL, Borderline high : 130-159 mg/dL, High : 160-189 mg/dL, Very high : >=190 mg/dL	Elimination / Catalase
VLDL	17	mg/dl	< 40 mg/dl	Calculated
CHOL HDL Ratio	4.9		LOW RISK 3.3-4.4 AVERAGE RISK 4.47-7.1 MODERATE RISK 7.1-11.0 HIGH RISK >11.0	Calculated

Reference: National Cholesterol Education Program. Executive summary of the third report of The National Cholesterol Education Program (NCEP) Expert Panel on detection, evaluation, and treatment of high blood cholesterol in adults (Adult Treatment Panel III). JAMA. May 16 2001;285(19):2486-97.

DR. ANANNYA GHOSH
MBBS, MD (Biochemistry)
Consultant Biochemist

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DEPARTMENT OF CARDIOLOGY
REPORT OF E.C.G.

DATA		
HEART RATE	76	Bpm
PR INTERVAL	170	Ms
QRS DURATION	70	Ms
QT INTERVAL	352	Ms
QTC INTERVAL	400	Ms
AXIS		
P WAVE	62	Degree
QRS WAVE	56	Degree
T WAVE	61	Degree
IMPRESSION	:	Sinus rhythm.
		Normal ECG.

ACR

Dr. A C RAY
Department of Non-invasive
Cardiology

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Report Date : 11/Mar/2023 12:51PM




X-RAY REPORT OF CHEST (PA)

FINDINGS :

No active lung parenchymal lesion is seen.
Both the hila are normal in size, density and position.
Mediastinum is in central position. Trachea is in midline.
Domes of diaphragm are smoothly outlined. Position is within normal limits.
Lateral costo-phrenic angles are clear.
The cardio-thoracic ratio is normal.
Bony thorax reveals no definite abnormality.

IMPRESSION :

Normal study.


Dr. Anoop Sastry
MBBS, DMRT(CAL)
CONSULTANT RADIOLOGIST
Registration No.: WB-36628

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Report Date : 13/Mar/2023 02:19PM



DEPARTMENT OF ULTRASONOGRAPHY
REPORT ON EXAMINATION OF WHOLE ABDOMEN

LIVER:

Liver is normal in size (127 mm) with **grade-I fatty change**. Intrahepatic tubular structures are not dilated. No focal altered echogenic sol is seen in hepatic parenchyma. No sub diaphragmatic fluid collection seen.

PORTA HEPATIS :

Portal vein measures 12 mm in diameter. No intraluminal echogenicity noted. CBD measures 2 mm in diameter at porta. Lumen is echo free as far as it can be traced. Extreme lower end cannot be evaluated due to overlaying bowel gas. No portal lymphadenopathy at present.

GALL BLADDER :

Gall bladder is physiologically distended with smooth wall. No intraluminal sol or echo reflective posterior shadow forming calculus is seen. At present no pericholecystic fluid collection seen.

PANCREAS:

Head, body and visible part of tail of pancreas is normal in size and shape without any definable sol. MPD is not dilated. No peripancreatic fluid collection seen.

SPLEEN:

Spleen measures 96 mm in long axis. Splenic parenchyma is homogeneous. Splenoportal axis is patent.

LEFT KIDNEY:

Left kidney is normal in size, shape, position and lie. Left kidney measures 103 mm in long axis. Cortico-medullary differentiation is maintained. No focal sol or hydronephrosis is seen in left kidney.

RIGHT KIDNEY:

Right kidney measures 91 mm in long axis. It is normal in size, shape, position and lie. Cortico-medullary differentiation is maintained. No focal sol or hydronephrosis is seen in right kidney.

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URETERS:

Either ureters are not dilated.

URINARY BLADDER:

Distended with normal shape and smooth wall. No intraluminal sol is seen at present.

PROSTATE:

Prostate measures 44 mm x 33 mm x 22 mm in size. Periprostatic fat plane is maintained. Prostatic echo texture is homogenous. Seminal vesicles appear normal. Prostatic weight is 18 gm

PERITONIUM:

No free fluid collection is seen in peritoneal cavity.

RETROPERITONIOUM:

Aorta is not dilated. IVC is patent. No obvious retro peritoneal lymphadenopathy seen.

LOWER PLEURAL SPACE:

No definable basal effusion is seen in either side.

IMPRESSION :

Grade-I fatty change in liver.

Kindly note

Ø *Ultrasound is not the modality of choice to rule out subtle bowel lesion.*

Ø *Please Intimate us for any typing mistakes and send the report for correction within 7 days.*

Ø *The science of Radiological diagnosis is based on the interpretation of various shadows produced by both the normal and abnormal tissues and are not always conclusive. Further biochemical and radiological investigation & clinical correlation is required to enable the clinician to reach the final diagnosis.*

The report and films are not valid for medico-legal purpose.

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Patient Identity not verified.


Dr. P Kumar
Sonologist

Patient Data

Sample ID: C02135028298
 Patient ID: SR7391402
 Name:
 Physician:
 Sex:
 DOB:

Analysis Data

Analysis Performed: 11/MAR/2023 13:21:56
 Injection Number: 5472U
 Run Number: 130
 Rack ID: 0004
 Tube Number: 5
 Report Generated: 11/MAR/2023 13:37:41
 Operator ID: ASIT

Comments:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
Unknown	---	0.2	0.110	2434
A1a	---	0.7	0.158	7872
A1b	---	1.7	0.220	19305
LA1c	---	1.7	0.401	20053
A1c	5.5	---	0.509	51765
P3	---	3.5	0.786	40648
P4	---	1.2	0.869	14498
Ao	---	86.6	0.998	1009373

Total Area: 1,165,947

HbA1c (NGSP) = 5.5 % HbA1c (IFCC) = 36 mmol/mol

