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NAME	**: Mr. ARSHVEER VIRK**		
AGE/ GENDER	: 12 YRS/MALE	**PATIENT ID**	: 1649272
COLLECTED BY	:	**REG. NO./LAB NO.**	**: 012410210065**
REFERRED BY	:	**REGISTRATION DATE**	: 21/Oct/2024 03:02 PM
BARCODE NO.	: 01519311	**COLLECTION DATE**	: 21/Oct/2024 06:50PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 21/Oct/2024 03:46PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

HAEMATOLOGY

COMPLETE BLOOD COUNT (CBC)

Test Name	Value	Unit	Biological Reference interval
RED BLOOD CELLS (RBCS) COUNT AND INDICES			
HAEMOGLOBIN (HB) *by CALORIMETRIC*	12.4	gm/dL	12.0 - 16.0
RED BLOOD CELL (RBC) COUNT *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	4.86	Millions/cmm	3.50 - 5.50
PACKED CELL VOLUME (PCV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	38.6	%	35.0 - 49.0
MEAN CORPUSCULAR VOLUME (MCV) ***by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER***	**79.5^{L}**	**fL**	**80.0 - 100.0**
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) ***by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER***	**25.5^{L}**	**pg**	**27.0 - 34.0**
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	32.1	g/dL	32.0 - 36.0
RED CELL DISTRIBUTION WIDTH (RDW-CV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	13.6	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	40.4	fL	35.0 - 56.0
MENTZERS INDEX *by CALCULATED*	16.36	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX *by CALCULATED*	22.23	RATIO	BETA THALASSEMIA TRAIT:<= 65.0 IRON DEFICIENCY ANEMIA: > 65.0
WHITE BLOOD CELLS (WBCS)			
TOTAL LEUCOCYTE COUNT (TLC) *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	7170	/cmm	4000 - 12000
NUCLEATED RED BLOOD CELLS (nRBCS) *by AUTOMATED 6 PART HEMATOLOGY ANALYZER*	NIL		0.00 - 20.00
NUCLEATED RED BLOOD CELLS (nRBCS) % *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	NIL	%	< 10 %
DIFFERENTIAL LEUCOCYTE COUNT (DLC)			
NEUTROPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	55	%	50 - 70

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Test Name	Value	Unit	Biological Reference interval
LYMPHOCYTES *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	35	%	20 - 45
EOSINOPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	4	%	1 - 6
MONOCYTES *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	6	%	3 - 12
BASOPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	0	%	0 - 1
ABSOLUTE LEUKOCYTES (WBC) COUNT			
ABSOLUTE NEUTROPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	3944	/cmm	2000 - 7500
ABSOLUTE LYMPHOCYTE COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	2510	/cmm	800 - 4900
ABSOLUTE EOSINOPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	287	/cmm	40 - 440
ABSOLUTE MONOCYTE COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	430	/cmm	80 - 880
ABSOLUTE BASOPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	0	/cmm	0 - 110
PLATELETS AND OTHER PLATELET PREDICTIVE MARKERS.			
PLATELET COUNT (PLT) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	246000	/cmm	150000 - 450000
PLATELETCRIT (PCT) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	0.26	%	0.10 - 0.36
MEAN PLATELET VOLUME (MPV) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	10	fL	6.50 - 12.0
PLATELET LARGE CELL COUNT (P-LCC) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	72000	/cmm	30000 - 90000
PLATELET LARGE CELL RATIO (P-LCR) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	29.4	%	11.0 - 45.0
PLATELET DISTRIBUTION WIDTH (PDW) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	16	%	15.0 - 17.0

NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD

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Test Name	Value	Unit	Biological Reference interval

D-DIMER (QUANTITATIVE)

D - DIMER (QUANTITATIVE)	178.2	ng/mL	0.00 - 500.00

by EFIA (FLUORESCENT ENZYME IMMUNOASSAY)

INTERPRETATION:

During coagulation sequence of reactions occuring in the body in response to variety of external and/or internal stimuli. The enzymaticcascade reaction reaction terminates in the conversion of fibrinogen to fibrin by enzyme thrombin. The fibrin gel is then converted to a stable fibrin clot. The fibrin network is dissolved by enzyme plasmin to generate cross-linked FIBRIN DEGRADATON PRODUCTS. D-DIMER is the smallest plasmin resistant molecular unit present within FDP.

INCREASED D-DIMER IS SEEN IN FOLLOWING CONDITIONS:

1.Deep Vein Thrombosis (DVT)
2.Venous Thromboembolism
3.Recent Surgery
4.Trauma
5.Infection
6.Liver disease
7.Pregnancy
8.Eclampsia
9.Heart Disease
10.Some cancers
11.Elderly

NOTE:

1. A normal or low D-dimer helps to rule out clotting as cause of symtoms.

2. D- DIMER is approximately 6 hours in circulation of individuals with normal renal functions. Patients with stabilized clots and not going active fibrin deposition and plasmin activation may not give detectable D-Dimer elevation,anti-coagulant therapy.

3. In Pulmonary Embolism (PE), the larger the clot size, higher the expected level of of circulating D-Dimer. Conversely, theamount of D – DIMER release from very small clots may be diluted by circulation and may not give detectable increase.

4. Fibrionolysis is a highly regulated process and in dynamic delicate balance. In case of hereditary, acquired deficiency and dysfunction of fibrinogen, the rate of fibrinolysis will be altered thereby not giving detectable D-Dimer level.

5. False positive may be seen with high levels of rheumatoid factor, bilirubin, lipemic sera and haemolysed blood

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Test Name	Value	Unit	Biological Reference interval

IMMUNOPATHOLOGY/SEROLOGY

ANTI THYROID PEROXIDASE (TPO/AMA) ANTIBODIES

ANTI TPO/AMA ANTIBODIES: SERUM	< 1.00	IU/mL	0.00 - 10.0

by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)

INTERPRETATION:

1. Thyroperoxidase (TPO) is an enzyme involved inthyroid hormone synthesis, catalyzing the oxidation of iodide on tyrosine residues in thyroglobulin for the synthesis of triiodothyronine and thyroxine (tetraiodothyronine).
2. TPO is a membrane-associated hemo glycoprotein expressed only in thyrocytes and is one of the most important thyroid gland antigens.
3. Anti-TPO is technically superior and a more specific method for measuring thyroid auto-antibodies , It is especially useful in patients presenting with subclinical hypothyroidism where TSH is elevated but Free T4 levels are normal.

INCREASED LEVELS (Autoimmune thyroid disease):

1. Hashimoto thyroiditis.
2. Idiopathic myxedema.
3. Graves disease
4. Post-partum thyroiditis.
5. Primary hypothyroidism due to Hashimoto thyroiditis.

NOTE:

1. The highest TPO antibody levels are observed in patients suffering from Hashimoto thyroiditis. In this disease, the prevalence of TPO antibodies is about 90% of cases, confirming the autoimmune origin of the disease.
2. These auto-antibodies also frequently occur (60%-80%) in the course of Graves disease.
3. In patients with subclinical hypothyroidism, the presence of TPO antibodies is associated with an increased risk of developing overt hypothyroidism.

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Test Name	Value	Unit	Biological Reference interval

C-REACTIVE PROTEIN (CRP)

C-REACTIVE PROTEIN (CRP) QUANTITATIVE: SERUM	0.36	mg/L	0.0 - 6.0

by NEPHLOMETRY

INTERPRETATION:

1. C-reactive protein (CRP) is one of the most sensitive acute-phase reactants for inflammation.
2. CRP levels can increase dramatically (100-fold or more) after severe trauma, bacterial infection, inflammation, surgery, or neoplastic proliferation.
3. CRP levels (Quantitative) has been used to assess activity of inflammatory disease, to detect infections after surgery, to detect transplant rejection, and to monitor these inflammatory processes.
4. As compared to ESR, CRP shows an earlier rise in inflammatory disorders which begins in 4-6 hrs, the intensity of the rise being higher than ESR and the recovery being earlier than ESR. Unlike ESR, CRP levels are not influenced by hematologic conditions like Anemia, Polycythemia etc.,
5. Elevated values are consistent with an acute inflammatory process.

NOTE:

1. Elevated C-reactive protein (CRP) values are nonspecific and should not be interpreted without a complete clinical history.
2. Oral contraceptives may increase CRP levels.

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CLINICAL PATHOLOGY

URINE ROUTINE & MICROSCOPIC EXAMINATION

Test Name	Value	Unit	Biological Reference interval
PHYSICAL EXAMINATION			
QUANTITY RECIEVED *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	10	ml	
COLOUR *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	AMBER YELLOW		PALE YELLOW
TRANSPARANCY *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	CLEAR		CLEAR
SPECIFIC GRAVITY *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	1.02		1.002 - 1.030
CHEMICAL EXAMINATION			
REACTION *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	ACIDIC		
PROTEIN *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	Negative		NEGATIVE (-ve)
SUGAR *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	Negative		NEGATIVE (-ve)
pH *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	<=5.0		5.0 - 7.5
BILIRUBIN *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	Negative		NEGATIVE (-ve)
NITRITE *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY.*	Negative		NEGATIVE (-ve)
UROBILINOGEN *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	Normal	EU/dL	0.2 - 1.0
KETONE BODIES *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	Negative		NEGATIVE (-ve)
BLOOD *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	Negative		NEGATIVE (-ve)
ASCORBIC ACID *by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY*	NEGATIVE (-ve)		NEGATIVE (-ve)
MICROSCOPIC EXAMINATION			

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Test Name	Value	Unit	Biological Reference interval
RED BLOOD CELLS (RBCs) *by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT*	NEGATIVE (-ve)	/HPF	0 - 3
PUS CELLS *by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT*	0-3	/HPF	0 - 5
EPITHELIAL CELLS *by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT*	1-2	/HPF	ABSENT
CRYSTALS *by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT*	NEGATIVE (-ve)		NEGATIVE (-ve)
CASTS *by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT*	NEGATIVE (-ve)		NEGATIVE (-ve)
BACTERIA *by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT*	NEGATIVE (-ve)		NEGATIVE (-ve)
OTHERS *by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT*	A few sperm cells seen		NEGATIVE (-ve)
TRICHOMONAS VAGINALIS (PROTOZOA) *by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT*	ABSENT		ABSENT

*** End Of Report ***

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