Dr. Vinay Chopra
MD (Pathology & Microbiology)
Chairman & Consultant Pathologist

Dr. Yugam Chopra
MD (Pathology)
CEO & Consultant Pathologist

NAME	**: Mrs. AARTI**		
AGE/ GENDER	: 34 YRS/FEMALE	**PATIENT ID**	: 1659215
COLLECTED BY	:	**REG. NO./LAB NO.**	**: 012411020064**
REFERRED BY	:	**REGISTRATION DATE**	: 02/Nov/2024 06:55 PM
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HAEMATOLOGY

COMPLETE BLOOD COUNT (CBC)

Test Name	Value	Unit	Biological Reference interval
RED BLOOD CELLS (RBCS) COUNT AND INDICES			
HAEMOGLOBIN (HB) *by CALORIMETRIC*	**11.6**[L]	gm/dL	12.0 - 16.0
RED BLOOD CELL (RBC) COUNT *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	4.08	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	**36.8**[L]	%	37.0 - 50.0
MEAN CORPUSCULAR VOLUME (MCV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	90.3	fL	80.0 - 100.0
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	28.4	pg	27.0 - 34.0
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	**31.5**[L]	g/dL	32.0 - 36.0
RED CELL DISTRIBUTION WIDTH (RDW-CV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	14.6	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	49.1	fL	35.0 - 56.0
MENTZERS INDEX *by CALCULATED*	22.13	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX *by CALCULATED*	32.28	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*	10020	/cmm	4000 - 11000
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 %

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CONSULTANT PATHOLOGIST
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

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CONSULTANT PATHOLOGIST
MBBS , MD (PATHOLOGY)

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Test Name	Value	Unit	Biological Reference interval
DIFFERENTIAL LEUCOCYTE COUNT (DLC)			
NEUTROPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	66	%	50 - 70
LYMPHOCYTES *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	22	%	20 - 40
EOSINOPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	4	%	1 - 6
MONOCYTES *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	8	%	2 - 12
BASOPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	0	%	0 - 1
IMMATURE GRANULOCTE (IG) % *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	0	%	0 - 5.0
ABSOLUTE LEUKOCYTES (WBC) COUNT			
ABSOLUTE NEUTROPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	6613	/cmm	2000 - 7500
ABSOLUTE LYMPHOCYTE COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	2204	/cmm	800 - 4900
ABSOLUTE EOSINOPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	401	/cmm	40 - 440
ABSOLUTE MONOCYTE COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	802	/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*	185000	/cmm	150000 - 450000
PLATELETCRIT (PCT) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	0.21	%	0.10 - 0.36
MEAN PLATELET VOLUME (MPV) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	11	fL	6.50 - 12.0
PLATELET LARGE CELL COUNT (P-LCC) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	67000	/cmm	30000 - 90000
PLATELET LARGE CELL RATIO (P-LCR) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	36.5	%	11.0 - 45.0
PLATELET DISTRIBUTION WIDTH (PDW) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	16.4	%	15.0 - 17.0

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Test Name	Value	Unit	Biological Reference interval

NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD

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Test Name	Value	Unit	Biological Reference interval

PERIPHERAL BLOOD SMEAR FOR MALARIA

PERIPHERAL BLOOD SMEAR FOR MALARIAL PARASITE (MP) *by MICROSCOPY*	NO MALARIA PARASITE (MP) SEEN IN SMEAR EXAMINED		

DR.VINAY CHOPRA
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Test Name	Value	Unit	Biological Reference interval

IMMUNOPATHOLOGY/SEROLOGY

TYPHOID COMBO SCREEN (TYPHOID ANTIGEN, IgG AND IgM): SERUM

TYPHOID ANTIGEN - SERUM *by ICT (IMMUNOCHROMATOGRAPHY)*	NEGATIVE (-ve)		NEGATIVE (-ve)
TYPHI DOT ANTIBODY IgG *by ICT (IMMUNOCHROMATOGRAPHY)*	WEAKLY POSITIVE (+ve)		NEGATIVE (-ve)
TYPHI DOT ANTIBODY IgM *by ICT (IMMUNOCHROMATOGRAPHY)*	WEAKLY POSITIVE (+ve)		NEGATIVE (-ve)

INTERPRETATION:

Typhoid fever is a life threatening illness caused by the bacterium Salmonella typhus.The infection is acquired typically by ingestion. On reaching the gut, the bacilli attach themselves to the epithelial cells of the intestinal villi and penetrate the lamina and submucosa. They are then phagocytosed there by polymorphs and mesenteric lymph nodes, where they multiply and, via the thoracic duct, enter the blood stream. A transient bacteremia follows, during which the bacilli are seeded in the liver, gall bladder, spleen, bone marrow, lymph nodes, and kidneys, where further multiplication takes place. Towards the end of the incubation period, there occurs a massive bacteremia from these sites, heralding the onset of the clinical symptoms.

The diagnosis of typhoid consists of isolation of the bacilli and the demonstration of antibodies. The isolation of the bacilli is very time consuming and antibody detection is not very specific. Other tests include the Widal reaction. The advantage of this test is that it takes only 10-20 minutes and requires only a small amount of stool/serum/plasma to perform. It is the easiest and most specific method for detecting S. typhi infection.

RELATIVE SENSTIVITY OF TYPHOID ANTIGEN DETECTION: 98.7%
RELATIVE SPECIFICITY OF TYPHOID ANTIGEN DETECTION: 97.4%

DETECTABLE IgM RESPONSE:

ONSET OF FEVER	PERCENT POSITIVE
4 - 6 DAYS	43.5
6 - 9 DAYS	92.9
> 9 DAYS	99.5

1.This is a solid phase, immunochromatographic ELISA assay that detects specific IgM and IgG Antibodies against the OUTER MEMBRAN PROTEIN(OMP) of theSalmonella species. IgM antibodies appear in the serum 2-3 days post infection and are indicative of a recent infection while the IgG antibodies appear later and are useful for presumptive diagnosis of Enteric fever if the patient presents more than a week after onset of symptoms.

2.This is a useful screening assay for the early detection of Enteric fever and has a high sensitivity. However the test has moderate specificity and false positive results may be obtained in the following situations:

- Antibodies against Salmonella may cross react with other antibodies.
- Unrelated infections may lead to production of specific Salmonella antibodies if the patient has previously been exposed to

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Test Name	Value	Unit	Biological Reference interval

Salmonella infection **(ANAMNESTIC RESPONSE)**.

NOTE:-Rapid blood culture performed during 1st week of infection is highly recommended for confirmation of all IgM positive results. In case the patient has presented after the first week of infection, a thorough clinical correlation and confirmatory Widal test must be performed to establish the diagnosis.

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Test Name	Value	Unit	Biological Reference interval

DENGUE FEVER COMBO SCREENING - (NS1 ANTIGEN, IgG AND IgM)

DENGUE NS1 ANTIGEN - SCREENING *by ICT (IMMUNOCHROMATOGRAPHY)*	NEGATIVE (-ve)		NEGATIVE (-ve)
DENGUE ANTIBODY IgG - SCREENING *by ICT (IMMUNOCHROMATOGRAPHY)*	NEGATIVE (-ve)		NEGATIVE (-ve)
DENGUE ANTIBODY IgM - SCREENING *by ICT (IMMUNOCHROMATOGRAPHY)*	NEGATIVE (-ve)		NEGATIVE (-ve)

INTERPRETATION:-

*1.*This is a solid phase immunochromatographic ELISA test for the qualitative detection of the specific IgG and IgM antibodies against the Dengue virus.
2.The IgM antibodies take a minimum of 5-10 days in primary infection and 4-5 days in secondary infections to test positive and hence are suitable for the diagnosis of dengue fever only when the fever is approximately one week old.
3.The IgG antibodies develop at least two weeks after exposure to primary infection and subsequently remain positive for the rest of the life. A positive result is incapable of differentiating a current infection from a past infection.
4.The Dengue NS-1 antigen test is most suited for early diagnosis (within the first week of exposure).

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WIDAL SLIDE AGGLUTINATION TEST

Test Name	Value	Unit	Biological Reference interval
SALMONELLA TYPHI O *by SLIDE AGGLUTINATION*	1 : 40	TITRE	1 : 80
SALMONELLA TYPHI H *by SLIDE AGGLUTINATION*	1 : 80	TITRE	1 : 160
SALMONELLA PARATYPHI AH *by SLIDE AGGLUTINATION*	NIL	TITRE	1 : 160
SALMONELLA PARATYPHI BH *by SLIDE AGGLUTINATION*	NIL	TITRE	1 : 160

INTERPRETATION:

1.Titres of 1:80 or more for "O" agglutinin is considered significant.
2.Titres of 1:160 or more for "H" agglutinin is considered significant.

LIMITATIONS:

1.Agglutinins usually appear by 5th to 6th day of illness of enteric fever, hence a negative result in early stage is inconclusive.The titre then rises till 3rd or 4th week, after which it declines gradually.
2.Lower titres may be found in normal individuals.
3.A single positive result has less significance than the rising agglutination titre, since demonstration of rising titre four or more in 1st and 3rd week is considered as a definite evidence of infection.
4.A simultaneous rise in H agglutinins is suggestive of paratyphoid infection.

NOTE:

1.Individuals with prior infection or immunization with TAB vaccine may develop an ANAMNESTIC RESPONSE (False-Positive) during an unrelated fever i.e High titres of antibodies to various antigens.This may be differentiated by repitition of the test after a week.
2.The anamnestic response shows only a transient rise, while in enteric fever rise is sustained.
3.H agglutinins tend to persist for many months after vaccination but O agglutinins tend to disappear sooner i.e within 6 months.Therefore rise in Oagglutinins indicate recent infection.

*** End Of Report ***

DR.VINAY CHOPRA
CONSULTANT PATHOLOGIST
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MBBS , MD (PATHOLOGY)