Dr. Vinay Chopra
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Chairman & Consultant Pathologist

Dr. Yugam Chopra
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CEO & Consultant Pathologist

NAME	**: Mr. SANJEEV GANDHI**		
AGE/ GENDER	: 53 YRS/MALE	**PATIENT ID**	: 1545389
COLLECTED BY	:	**REG. NO./LAB NO.**	**: 012407110028**
REFERRED BY	:	**REGISTRATION DATE**	: 11/Jul/2024 10:38 AM
BARCODE NO.	: 01512924	**COLLECTION DATE**	: 11/Jul/2024 10:39AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 14/Jul/2024 09:49AM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

CLINICAL PATHOLOGY

METANEPHRINES: 24 HOURS URINE

METANEPHRINES: 24 HOURS URINE *by ELISA (ENZYME LINKED IMMUNOASSAY)*	0.19	µg/24 hrs	up to 1.00 mg/24-h

INTERPRETATION:

1.Metanephrines & Normetanephrines are metabolites of catecholamines(epinephrine & norepinephrine).
2.Catecholamine are important hormones in blood pressure regulation & produced mainly by the adrenal medulla & sympathetic ganglia. They are released in small fluctuating quantities in both the blood and urine.
3.Smaller increases in metanephrine and/or normetanephrine concentrations (less than two times the upper reference limit) usually are the result of physiological stimuli, drugs, or prolonged systemic illness, ingestion of coffee ,tobacco,tea, alcohol, drugs like acetoaminophen. Essential hypertension is often associated with slight elevations (metanephrine less than 700 µg/d and normetanephrine less than 900 µg/d).
4.Significant elevation of one or both metanephrines (three or more times the upper reference limit) is associated with an increased probability of a neuroendocrine tumor(phaechromocytoma, neuroblastoma).
5.Ratios to creatinine are useful for correct evaluations, especially in the following conditions- like paediatric or elderly patients with a random or a timed collection of less than 20 hours or a collection with total urine volume less than 400 mL.
6.The ratios have also been shown to have better specificity & positive predictive value over 24 hr metanephrine/normetanephrine excretion values.

NOTE:

1.Complete 24 hour urine collection is preferred in patients with episodic hypertension
2. Urine metanephrines <=1300 ug/24 hrs can be detected in Non- Pheochromocytoma hypertensive patients.

USES:

As a screening test for the presumptive diagnosis of catecholamine secreting Pheochromocytomas and Paragangliomas.

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COLLECTED BY	:	**REG. NO./LAB NO.**	**: 012407110028**
REFERRED BY	:	**REGISTRATION DATE**	: 24/Jul/2024 04:49 PM
BARCODE NO.	: 01512924	**COLLECTION DATE**	: 24/Jul/2024 04:49PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 24/Jul/2024 05:04PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

CATECHOLAMINES FRACTIONATED (ADRENALINE AND NOR-ADRENALINE) : 24 HOURS URINE

Test Name	Value	Unit	Biological Reference interval
URINE VOLUME: 24 HOUR *by LC-MS (LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY)*	1600	mL	
ADRENALINE/EPINEPHRINE : 24 HOURS URINE *by LC-MS (LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY)*	5.34	µg/24 hrs	4.00 - 20.00
NOR-ADRENALINE/NOREPINEPHRINE - 24 HOURS URINE *by LC-MS (LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY)*	75.5	µg/24 hrs	23.00 - 105.00

INTERPRETATION

ANALYTE	AGE IN YEARS	REFERENCE RANGE IN µg/24 hrs
EPINEPHRINE	0 - 1	0.00 – 2.50
	> 1 - 2	0.00 – 3.50
	> 2 - 4	0.00 – 6.00
	> 4 - 7	0.00 – 10.00
	> 7 - 10	0.00 – 14.00
	> 10 - 14	0.00 – 20.00
	> 1 4	4.00 – 20.00
NOREPINEPHRINE	0 - 1	0.00 – 10.00
	> 1 - 2	0.00 – 17.00
	> 2 - 4	0.00 – 30.00
	> 4 - 7	0.00 – 45.00
	> 7 - 10	0.00 – 65.00
	> 10 - 14	0.00 – 70.00
	> 1 4	23.00 – 105.00
DOPAMINE	0 - 1	0.00 – 180.00
	> 1 - 3	0.00 – 240.00
	> 3 - 9	30.00 – 378.00
	>9-13	51.00 – 474.00
	>13-17	51.00 – 675.00
	>17	62.00 – 476.00

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Test Name	Value	Unit	Biological Reference interval

COMMENTS:

1.Catecholamines are important neurotransmitters in Central Nervous System and play a crucial role in autonomic regulation of many homeostatic functions.
2.The circulating fraction of catecholamines is derived almost exclusively from Adrenal medulla with small contribution from sympathetic ganglia.
3.Their levels increase rapidly in response to changes in posture, environmental temperature, physical and emotional stress, hypovolemia, hypotension, hypoglycemia and exercise. Urine catecholamine levels are elevated in Pheochromocytoma and Paraganglioma.

USES:

1.As an auxillary test to fractionated plasma and urine metanephrine measurements in the diagnosis of Pheochromocytoma and Paraganglioma
2.As an auxillary test to urine VMA & HVA in the diagnosis and follow up of patients with Neuroblastoma and related tumor.

*** End Of Report ***

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