

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

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

NAME	: Mr. JITENDER KUMAR	PATIENT ID	: 1691328
AGE/ GENDER	: 33 YRS/MALE	REG. NO./LAB NO.	: 012412050018
COLLECTED BY	:	REGISTRATION DATE	: 05/Dec/2024 11:25 AM
REFERRED BY	:	COLLECTION DATE	: 05/Dec/2024 11:37AM
BARCODE NO.	: 01522009	REPORTING DATE	: 05/Dec/2024 12:38PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
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ENDOCRINOLOGY

LUTEINISING HORMONE (LH)

LUTEINISING HORMONE (LH): SERUM by CMIA (CHEMILUMINESCENT PARTICLE IMMUNOASSAY)	9.45	mIU/mL	MALES: 0.57 - 12.07 FOLLICULAR PHASE: 1.80 - 11.78 MID-CYCLE PEAK: 7.59 - 89.08 LUTEAL PHASE: 0.56 - 14.0 POST MENOPAUSAL WITHOUT HRT: 5.16 - 61.99
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INTERPRETATION:

- Luteinizing hormone (LH) is a glycoprotein hormone consisting of 2 non covalently bound subunits (alpha and beta). Gonadotropin-releasing hormone from the hypothalamus controls the secretion of the gonadotropins, FSH and LH, from the anterior pituitary.
- In both males and females, LH is essential for reproduction. In females, the menstrual cycle is divided by a mid cycle surge of both LH and FSH into a follicular phase and a luteal phase.
- This "LH surge" triggers ovulation thereby not only releasing the egg, but also initiating the conversion of the residual follicle into a corpus luteum that, in turn, produces progesterone to prepare the endometrium for a possible implantation.
- LH supports thecal cells in the ovary that provide androgens and hormonal precursors for estradiol production. LH in males acts on testicular interstitial cells of Leydig to cause increased synthesis of testosterone.

The test is useful in the following situations:

- An adjunct in the evaluation of menstrual irregularities.
- Evaluating patients with suspected hypogonadism
- Predicting ovulation & Evaluating infertility
- Diagnosing pituitary disorders
- In both males and females, primary hypogonadism results in an elevation of basal follicle-stimulating hormone and luteinizing hormone levels.

FSH AND LH ELEVATED IN:

- Primary gonadal failure
- Complete testicular feminization syndrome
- Precocious puberty (either idiopathic or secondary to a central nervous system lesion)
- Menopause
- Primary ovarian hypo dysfunction in females
- Polycystic ovary disease in females
- Primary hypogonadism in males

LH IS DECREASED IN:

- Primary ovarian hyper function in females
- Primary hypergonadism in males

NOTE

- FSH and LH are both decreased in failure of the pituitary or hypothalamus.





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FOLLICLE STIMULATING HORMONE (FSH)

FOLLICLE STIMULATING HORMONE (FSH): SERUM <i>by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)</i>	28.95	mIU/mL	FEMALE FOLLICULAR PHASE: 3.03 - 8.08 FEMALE MID-CYCLE PEAK: 2.55 - 16.69 FEMALE LUTEAL PHASE: 1.38 - 5.47 FEMALE POST-MENOPAUSAL: 26.72 - 133.41 MALE: 0.95 - 11.95
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INTERPRETATION:

1. Gonadotropin-releasing hormone from the hypothalamus controls the secretion of the gonadotropins, follicle-stimulating hormone (FSH) and luteinizing hormone (LH) from the anterior pituitary.
2. The menstrual cycle is divided by a midcycle surge of both FSH and LH into a follicular phase and a luteal phase.
3. FSH appears to control gametogenesis in both males and females.

The test is useful in the following settings:

1. An adjunct in the evaluation of menstrual irregularities.
2. Evaluating patients with suspected hypogonadism.
3. Predicting ovulation
4. Evaluating infertility
5. Diagnosing pituitary disorders
6. In both males and females, primary hypogonadism results in an elevation of basal follicle-stimulating hormone (FSH) and luteinizing hormone (LH) levels.

FSH and LH LEVELS ELEVATED IN:

1. Primary gonadal failure
2. Complete testicular feminization syndrome.
3. Precocious puberty (either idiopathic or secondary to a central nervous system lesion)
4. Menopause (postmenopausal FSH levels are generally >40 IU/L)
5. Primary ovarian hypofunction in females
6. Primary hypogonadism in males

NOTE:

1. Normal or decreased FSH is seen in polycystic ovarian disease in females
2. FSH and LH are both decreased in failure of the pituitary or hypothalamus.




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CLINICAL PATHOLOGY

SEMEN ANALYSIS/SEMINOGRAM

PHYSICAL EXAMINATION

TIME OF SPECIMEN COLLECTION	05-12-2024	AM/PM	
DURATION OF ABSTINENCE	3 DAYS	DAYS	2 - 7
TYPE OF SAMPLE	FRESH		
LIQUIFACTION TIME AT 37°C	< 30 MINS	MINS	30 - 60
VOLUME	1	ML	
COLOUR	WHITISH OPAQUE		WHITISH OPAQUE
VISCOSITY	VISCOUS		VISCOUS
pH	7.5		5.0 - 7.5

AUTOMMATED SEMEN ANALYSIS, GOLD STANDARD, WHO APPROVED (SQA GOLD)

TOTAL SPERM CONCENTRATION <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	NIL	Millions/mL	12 - 16
TOTAL MOTILITY (GRADE A + GRADE B + GRADE C) <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	0	%	> = 42.0
MORPHOLOGY NORMAL <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	0	%	> = 4.0
MOTILE SPERM CONCENTRATION <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	N.A	Millions/mL	> = 6.0
FUNCTIONAL SPERM CONCENTRATION <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	N.A	Millions/mL	
VELOCITY (AVERAGE PATH VELOCITY) <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	N.A	Mic/sec	> = 5
SPERM MOTILE INDEX (SMI) <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	N.A		> = 80

TOTAL PER EJACULATION

TOTAL SPERM NUMBER <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	NIL	Millions/ejc.	> = 39.0
TOTAL MOTILE SPERM <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	N.A	Millions/ejc.	> = 16.0
TOTAL PROGRESSIVE MOTILE SPERM <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	N.A	Millions/ejc.	> = 12.0




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TOTAL FUNCTIONAL SPERM <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	N.A	Millions/ejc.	
TOTAL MORPHOLOGY NORMAL SPERM <i>by ELECTRO-OPTICS SIGNAL & COMPUTER ALOGRITHM</i>	N.A	Millions/ejc.	> = 2.0
MANUAL MICROSCOPY AND MORPHOLOGY			
VITALITY <i>by MICROSCOPY</i>	N.A	%	
RED BLOOD CELLS (RBCs) <i>by MICROSCOPY</i>	NOT DETECTED	/HPF	NOT DETECTED
PUS CELLS <i>by MICROSCOPY</i>	0-2	/HPF	0 - 5
EPITHELIAL CELLS <i>by MICROSCOPY</i>	1-2	/HPF	ABSENT
AGGLUTINATES <i>by MICROSCOPY</i>	NOT DETECTED		NOT DETECTED
AMORPHOUS DEPOSITS/ROUND CELLS/DEBRIS <i>by MICROSCOPY</i>	NOT DETECTED		NOT DETECTED
BACTERIA <i>by MICROSCOPY</i>	NEGATIVE (-ve)		NEGATIVE (-ve)
CHEMICAL EXAMINATION			
SEMEN FRUCTOSE (QUALITATIVE) <i>by QUALITATIVE METHOD USING RESORCINOL</i>	POSITIVE (+ve)		POSITIVE (+ve)
IMPRESSION	AZOOSPERMIA		
INTERPRETATION:			

1. Fructose is the energy source for sperm motility. A positive fructose is considered normal.
 2. Azoospermia and fructose negative results may indicate an absence of seminal vesicles / vas deferens in the area of seminal vesicles / obstruction of seminal vesicles.

*** End Of Report ***




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