Pathkind Labs

MC - 3055

Client

Gurugram

Pathkind Diagnostics Pvt. Ltd.

Plot No. 55-56, Udhyog Vihar Ph-IV, Gurugram - 122015

Processed By

Pathkind Diagnostics Pvt. Ltd.

Plot No. 55-56, Udhyog Vihar Ph-IV, Gurugram - 122015

Name	: **Mr. PL147**		Billing Date	:	07/07/2023 12:25:14
Age	: 35 Yrs		Sample Collected on	:	10/07/2023 10:01:31
Sex	: Male		Sample Received on	:	10/07/2023 11:02:13
P. ID No.	: P1000100012813		Report Released on	:	11/07/2023 17:26:39
Accession No	: **10002304869**		Barcode No.	:	10002304869
Referring Doctor	: Self				
Referred By	:		Ref no.	:	

Report Status - Final

Test Name	Result	Biological Ref. Interval	Unit
	BIOCHEMISTRY		
Amenorrhoea Panel			
Luteinizing Hormone (LH) *Sample: Serum* *Method: ECLIA*	48.0	1.7 - 8.6	mIU/mL
Follicle-Stimulating Hormone (FSH) *Sample: Serum* *Method: ECLIA*	26.20	1.5-12.4	mIU/mL
Prolactin (PRL) *Sample: Serum* *Method: ECLIA*	18.6	4.6 - 21.4	ng/mL
Estradiol (E2) *Sample: Serum* *Method: ECLIA*	50.25	23.80 - 60.70 11.4 - 43.2	pg/mL
TSH 3rd Generation *Sample: Serum* *Method: ECLIA*	2.310	0.270 - 4.200	µIU/mL
Testosterone Total *Sample: Serum* *Method: ECLIA*	3.20	2.80 - 8.00	ng/mL

Luteinizing Hormone (LH)

Clinical Significance :

Lutenizing Hormone (LH) levels are raised in both males and females in primary hypogonadism, menopause, Complete testicular feminization syndrome, Precocious puberty , Primary ovarian hypodysfunction in females and Polycystic ovary disease in females. LH is decreased in Primary ovarian hyperfunction in females , Primary hypergonadism in males and in both males and females in failure of the pituitary or hypothalamus.

Follicle-Stimulating Hormone (FSH)

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Customer Care: 75000-75111

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Clinical Significance :

FSH levels are raised In both males and females in primary hypogonadism.,primary gonadal failure, Complete testicular feminization syndrome,Precocious puberty and Menopause. Normal or decreased FSH are seen in Polycystic ovary disease.

Prolactin (PRL)

1. Prolactin is secreted in a pulsatile manner and is also influenced by a variety of physiologic stimuli, it is recommended to test pooled sample ie 3 specimens at 20-30 minute intervals.
2. Major circulating form of Prolactin is a nonglycosylated monomer, but several forms of Prolactin linked with immunoglobulin occur which can give falsely high Prolactin results.
3. Macroprolactin assay is recommended if prolactin levels are elevated, but signs and symptoms of hyperprolactinemia are absent or pituitary imaging studies are normal

Clinical Use

* Diagnosis & management of pituitary adenomas
* Differential diagnosis of male & female hypogonadism

Increased Levels

* Physiologic: Sleep, stress, postprandially, pain, coitus, pregnancy, nipple stimulation or nursing
* Systemic disorders: Chest wall or thoracic spinal cord lesions, Primary / Secondary hypothyroidism, Adrenal insufficiency, Chronic renal failure, Cirrhosis
* Medications:
    * Psychiatric medications like Phenothiazine, Haloperidol, Risperidone, Domperidone, Fluoexetine, Amitriptylene, MAO inhibitors etc.,
    * Antihypertensives: Alphamethyldopa, Reserpine, Verapamil
    * Opiates: Heroin, Methadone, Morphine, Apomorphine
    * Estrogens
    * Oral contraceptives
    * Cimetidine / Ranitidine
* Prolactin secreting pituitary tumors: Prolactinoma, Acromegaly
* Miscellaneous: Polycystic ovarian disease, Epileptic seizures, Ectopic secretion of prolactin by non-pituitary tumors, pressure /

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transaction of pituitary stalk, macroprolactinemia
* Idiopathic

Decreased levels
* Pituitary deficiency: Pituitary necrosis / infarction
* Bromocriptine administration
* Pseudohypoparathyroidism

Estradiol (E2)

Clinical Significance :

Estradiol (E2) levels are low in hypogonadism. If low E2 levels are associated with high luteinizing hormone (LH) and follicle stimulating hormone (FSH) levels,it is indicative of primary gonadal failure. The main causes are genetic, autoimmune and toxic (eg, related to chemotherapy or radiation therapy for malignant disease). If LH/FSH levels are low or normal, it is indicative of hypogonadotrophic hypogonadism. This may be due to functional causes, such as starvation, overexercise, severe physical or emotional stress, heavy drug and/or alcohol use and due to organic disease of the hypothalamus or pituitary. Irregular or absent menstrual periods with normal or high E2 levels are seen in possible polycystic ovarian syndrome, androgen producing tumors, or estrogen producing tumors. E2 levels also change during the menstrual cycle. Levels are low Post-menses and then rise during the follicular phase to a pre-ovulatory peak, and fall in the luteal phase. Low baseline levels and a lack of rise, as well as persistent high levels without midcycle rise, are indicative of anovulatory cycles.

TSH 3rd Generation

Clinical Significance :

TSH levels are elevated in primary hypothyroidism and low in primary hyperthyroidism. Evaluation of TSH is useful in the differential diagnosis of primary from secondary and tertiary hypothyroidism. In primary hypothyroidism, TSH levels are elevated, whil secondary and tertiary hypothyroidism, TSH levels are low or normal. High TSH level in the presence of normal FT4 is subclinical hypothyroidism and low TSH with normal FT4 is called subclinical hyperthyroidism. Sick, hospitalized patients may have falsely low or transiently elevated TSH. Significant diurnal variation is also seen in TSH levels.

Guidelines for TSH levels in pregnancy, as per American Thyroid Association, are as follows:

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PREGNANCY TRIMESTER	BIOLOGICAL REFERENCE INTERVAL	UNIT
FIRST TRIMESTER	0.100 - 2.500	µIU/mL
SECOND TRIMESTER	0.200 - 3.000	µIU/mL
THIRD TRIMESTER	0.300 - 3.000	µIU/mL

Testosterone Total

Clinical Significance :

Testosterone is the major androgenic hormone and is responsible for the development of the external genitalia and secondary sexual characteristics in males. It is an estrogen precursor in females, and in both genders, it has some anabolic effects and also influences behavior. High levels of testosterone during childhood leads to premature puberty in boys and masculinization in girls. Elevated levels in adult women results in varying degrees of virilization, including hirsutism, acne, oligo-amenorrhea and infertility. Mild-to-moderate testosterone elevations may be asymptomatic in males.Common causes of pronounced elevations of testosterone include congenital adrenal hyperplasia, adrenal, testicular, and ovarian tumors and abuse of testosterone or gonadotrophins by athletes.Low levels of testosterone is usually due to testicular failure in males, which can be primary, secondary or tertiary. It causes partial or complete hypogonadism and also causes some changes in the secondary sexual characteristics and the reprodictive function.In females, low levels of teststerone causes decline in libido and nonspecific mood changes.

** End of Report**

Dr. Aarti Khanna Nagpal
DNB (Pathology)
Senior Consultant

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