Pathkind Labs

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. SP599**	Billing Date	:	07/07/2023 12:32:59
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.	:	P1000100012988	Report Released on	:	20/07/2023 20:30:40
Accession No	:	**10002305044**	Barcode No.	:	10002305044-02, 10002305044-01
Referring Doctor	:	Self			
Referred By	:		Ref no.	:	

Report Status - Final

Test Name	Result	Biological Ref. Interval	Unit
Hair Fall Panel (Male & Female)			
Haemoglobin (Hb) *Sample: Whole Blood EDTA* *Method: Photometric measurement*	13.5	13.0 - 17.0	gm/dL
Calcium *Sample: Serum* *Method: Spectrophotometry - OCC*	9.5	8.6 - 10.0	mg/dL
Ferritin *Sample: Serum* *Method: ECLIA*	60.00	30.00 - 400.00	ng/mL
Phosphorus *Sample: Serum* *Method: Spectrophotometry-Phosphomolybdate Reduction*	4.2	2.6 - 4.5	mg/dL
TSH 3rd Generation *Sample: Serum* *Method: ECLIA*	3.500	0.270 - 4.200	µIU/mL
Estradiol (E2) *Sample: Serum* *Method: ECLIA*	26.00	23.80 - 60.70	pg/mL
Progesterone *Sample: Serum* *Method: ECLIA*	3.200	11.4 - 43.2	ng/mL
Dehydroepiandrosterone-Sulfate (DHEAS) *Sample: Serum* *Method: ECLIA*	**552.0 H**	160.0 - 449.0	µg/dL
Testosterone Total *Sample: Serum* *Method: ECLIA*	**2.30 L**	2.80 - 8.00	ng/mL

Iron Studies
Sample: Serum
Method: Method: Spectrophotometry-Ferrozine

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Iron *Sample: Serum* *Method: Spectrophotometry-Ferrozine*	109	59 - 158	µg/dL
UIBC **Unsaturated Iron Binding Capacity** *Sample: Serum* *Method: Spectrophotometry*	238	110 - 370	µg/dL
Total Iron Binding Capacity (TIBC) *Sample: Serum* *Method: Calculated*	347	228 - 428	µg/dL
% Saturation *Sample: Serum* *Method: Calculated*	31	20 - 50	%
Vitamin B12 *Sample: Serum* *Method: ECLIA*	**122** L	211 - 946	pg/mL

Ferritin

Clinical Significance :

Decreased levels of serum Ferritin is associated with increased risk for developing iron deficiency which in turn cn lead to anaemia. Increased levels of serum ferritin is associated with iron overload conditions(like hereditary hemochromatosis), common liver disorders, neoplasms, acute or chronic inflammation and hereditary hyperferritinemia-cataract syndrome.

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.

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

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

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.

Progesterone

Clinical Significance :

Progesterone is synthesized in the adrenal glands, corpus luteum, and placenta. Evaluation of progesterone levels is done to ascertain whether ovulation occurred in a menstrual cycle, for assessment of infertility, evaluation of abnormal uterine bleeding, evaluation of placental health in high-risk pregnancy, determining the effectiveness of progesterone injections when administered to women to help support early pregnancy and in workup of some patients with adrenal disorders.

Increased progesterone levels are seen with some ovarian cysts, molar pregnancies, rare forms of ovarian cancer, adrenal cancer, congenital adrenal hyperplasia, and testicular tumors. Low progesterone levels are seen in toxemia in late pregnancy, decreased ovarian function, amenorrhea, ectopic pregnancy, and miscarriage.

Dehydroepiandrosterone-Sulfate (DHEAS)

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Test Name	Result	Biological Ref. Interval	Unit

COMMENTS / INTERPRETATION :

- DHEA-S results should be interpreted in light of total clinical presentation of the patient.
- It is helpful in differentgial diagnosis of hirsutism, all forms of androgenization, hyperprolactenemia, PCOD and androgen producing tumors of adrenal cortex.

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.

Iron Studies

Iron is an essential trace mineral element which forms an important component of hemoglobin, metallocompounds and Vitamin A. Deficiency of iron, leads to microcytic hypochromic anemia. The toxic effects of iron are deposition of iron in various organs of the body and hemochromatosis.

Total Iron Binding capacity (TIBC) is a direct measure of the protein Transferrin which transports iron from the gut to storage sites in the bone marrow. In iron deficiency anemia, serum iron is reduced and TIBC increases.

Transferrin Saturation occurs in Idiopathic hemochromatosis and Transfusional hemosiderosis where no unsaturated iron binding capacity is available for iron mobilization. Similar condition is seen in congenital deficiency of Transferrin.

Vitamin B12

Clinical Significance :

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Vitamin B12 is necessary for hematopoiesis and normal neuronal function. It requires intrinsic factor (IF) for absorption. Vitamin B12 deficiency may be due to lack of IF secretion by gastric mucosa (eg, gastrectomy, gastric atrophy) or intestinal malabsorption (eg, ileal resection, small intestinal diseases). Vitamin B12 deficiency results in macrocytic anemia, glossitis, peripheral neuropathy, weakness, hyperreflexia, ataxia, loss of proprioception, poor coordination, and affective behavioral changes.

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** End of Report**

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Senior Consultant

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