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|------------------|---------------------|----------------------|---------------------------------------|
| Name: | ALICE | Age/Gender: | 28 Year(s) 0 Month(s) 0 Day(s)/Female |
| Referred By: | SUNIL KUMAR | Client Name: | |
| Collection Date: | 14-08-2021 12:47:00 | Report Release Date: | 15-08-2021 21:11:42 |

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Creatinine

| | | | | |
|---|---|-----|-----------|-------|
| 1 | Creatinine Serum, Method: Alkaline picrate kinetic | 0.8 | 0.4 - 1.2 | mg/dL |
|---|---|-----|-----------|-------|

Interpretation

Creatinine is a waste product produced by muscles from the breakdown of a compound called creatine. Creatinine is removed from the body by the kidneys, which filter almost all of it from the blood and release it into the urine. Increased creatinine levels in the blood suggest kidney disease or other conditions that affect kidney function. Low blood levels of creatinine are not common, but they are also not usually a cause for concern. They can be seen with conditions that result in decreased muscle mass.

| | | | | |
|---|---------------------------------------|--------|-----------|--------|
| 2 | Sodium serum, Method: Indirect ISE | 142.46 | 136 - 145 | mmol/L |
|---|---------------------------------------|--------|-----------|--------|

Interpretation

The electrolyte panel is used to identify an electrolyte, fluid, or pH imbalance (acidosis or alkalosis). It is frequently ordered as part of a routine physical. Electrolyte measurements may be used to help investigate conditions that cause electrolyte imbalances such as dehydration, kidney disease, lung diseases, or heart conditions. Repeat testing may then also be used to monitor treatment of the condition causing the imbalance.

High or low electrolyte levels can be affected by some hormones such as aldosterone, a hormone that conserves sodium and promotes the elimination of potassium, and natriuretic peptides, which increase elimination of sodium by the kidneys. With respect to the amount of water in a person's body, people whose kidneys are not functioning properly, may retain excess fluid. This results in a dilution effect on sodium and chloride so that they fall below normal concentrations. On the other hand, people who experience severe fluid loss may show an increase in potassium, sodium, and chloride concentrations. Some conditions such as heart disease and diabetes may also affect the fluid and electrolytes balance in the body and cause abnormal levels of electrolytes. Hemolysed samples may show false high serum potassium.

| | | | | |
|---|--|-----|-----------|--------|
| 3 | Potassium Serum, Method: Indirect ISE | 4.2 | 3.5 - 5.1 | mmol/L |
|---|--|-----|-----------|--------|

Interpretation

The electrolyte panel is used to identify an electrolyte, fluid, or pH imbalance (acidosis or alkalosis). It is frequently ordered as part of a routine physical. Electrolyte measurements may be used to help investigate conditions that cause electrolyte imbalances such as dehydration, kidney disease, lung diseases, or heart conditions. Repeat testing may then also be used to monitor treatment of the condition causing the imbalance.



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Patient Name: ALICE
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DCP, DNB (Pathology)



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Dr. Mahesh Hampe
MD (Biochemistry)



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Interpretation


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Thyroid Profile - Total T3, Total T4, TSH (TFT)

| | | | | |
|---|--|-------|------------|--------|
| 1 | Total T3 Serum, Method: CLIA | 90.37 | 60 - 200 | ng/dL |
| 2 | Total T4 Serum, Method: CLIA | 6.41 | 4.5 - 14.5 | µg/dL |
| 3 | TSH (Thyroid Stimulating Hormone) Serum, Method: CLIA | 3.246 | 0.35 - 5.5 | µIU/ml |

Interpretation

- Triiodothyronine (T3) is produced by the thyroid gland and along with thyroxine (T4) help control the rate at which the body uses energy. Elevated T3 denote hyperthyroidism while low levels indicate hypothyroidism.
- The most common causes of thyroid dysfunction are related to autoimmune disorders. Graves disease causes hyperthyroidism, but it can also be caused by thyroiditis, thyroid cancer, and excessive production of TSH. Total T3 is used to assess thyroid function.
- Elevated T4 levels may indicate hyperthyroidism. They may also indicate other thyroid problems, such as thyroiditis or toxic multinodular goiter. Abnormally low levels of T4 may indicate: dietary issues, such as fasting, malnutrition, or an iodine deficiency, medications that affect protein levels, hypothyroidism, illness.
- Thyroid-stimulating hormone (TSH) stimulates the production and release of T4 (primarily) and T3. They help control the rate at which the body uses energy and are regulated by a feedback system. Most of the T4 circulates in the blood bound to protein, while a small percentage is free (not bound).
- Lab has estimated Total T4 reference intervals that are specific for India, using the indirect sampling technique following CLSI EP28-A3c document: Defining Establishing, and Verifying Reference Intervals in the Clinical Laboratory: Approved Guideline-Third Edition.
- Thyroid hormone status during pregnancy:

| Pregnancy stage | TSH (µIU/ml) | T3 (ng/dl) | T4 (µg/dL) |
|------------------|--------------|------------|------------|
| First trimester | 0.05-3.70 | 71-175 | 6.5-10.1 |
| Second trimester | 0.31-4.35 | 91-195 | 7.5-10.3 |
| Third trimester | 0.41-5.18 | 104-182 | 6.3-9.7 |



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FSH, LH & Prolactin

| | | | | |
|---|---|-------|---|--------|
| 1 | Follicle Stimulating Hormone (FSH) Serum, Method: CLIA | 7.23 | Normally menstruating Follicular Phase: 2.5–10.2 Midcycle Peak: 3.4–33.4 Luteal Phase: 1.5–9.1 Pregnant < 0.3 Postmenopausal: 23.0–116.3 | mIU/mL |
| 2 | Luteinizing Hormone (LH) Serum, Method: CLIA | 3.45 | Normal range: 1.5 - 9.3 Menstruating Follicular phase: 1.9 – 12.5 Menstruating Midcycle peak: 8.7 – 76.3 Menstruating Luteal phase: 0.5 – 16.9 Pregnant: 0.1 – 1.5 Postmenopausal: 15.9 – 54.0 Contraceptives: 0.7 – 5.6 | mIU/mL |
| 3 | Prolactin Serum, Method: CLIA | 81.24 | Nonpregnant: 2.8–29.2 Postmenopausal: 1.8–20.3 Pregnant: 9.7–208.5 | ng/mL |

Interpretation

1. Follicle-stimulating hormone (FSH) is a hormone associated with reproduction and the development of eggs in women and sperm in men. In women, FSH levels are also useful in the investigation of menstrual irregularities, predicting onset or confirmation of menopause.

2. Luteinizing hormone (LH) is a hormone associated with reproduction and the stimulation of the release of an egg from the ovary (ovulation) in women and testosterone production in men. This test measures the amount of luteinizing hormone in the blood or urine. In both women and men, LH is often used in conjunction with other tests (FSH, testosterone, estradiol and progesterone) in the workup of infertility, to aid in the diagnosis of pituitary disorders that can affect LH production, to help diagnose conditions associated with dysfunction of the ovaries or testicles. In women, LH levels are useful in the investigation of menstrual irregularities to evaluate LH levels during the menstrual cycle; multiple urine LH tests may be ordered for this purpose.

3. Prolactin is a hormone produced by the anterior portion of the pituitary gland. Prolactin testing may be used, along with other hormone tests, to help to determine the cause of breast milk production not associated with pregnancy or breast-feeding (galactorrhea), diagnose the cause of infertility and erectile dysfunction in men, diagnose the cause of menstrual irregularities and/or infertility in women, to detect and diagnose tumors that produce excess prolactin (prolactinomas), monitor their treatment, and detect recurrences, to evaluate anterior pituitary function or other pituitary disorder.



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| | | | | |
|---|---------------------|--------------|---------------|--------------|
| 1 | Testosterone | 86.04 | 0 – 76 | ng/dL |
| | Serum, Method: CLIA | | | |

Interpretation

Testosterone is the main sex hormone (androgen) in men. It is responsible for male physical characteristics. It is present in large amounts in males during puberty and in adult males to regulate the sex drive and maintain muscle mass. In women, testosterone is converted to estradiol, the main sex hormone in females. Testosterone levels are diurnal, peaking in the early morning hours (about 4:00 to 8:00 am), with the lowest levels in the evening (about 4:00 to 8:00 pm). Levels also increase after exercise and also decrease with age. Testosterone test may be used to help evaluate conditions such as delayed or precocious (early) puberty in boys, decreased sex drive in men and women, erectile dysfunction in men, infertility in men and women, testicular tumors in men, hypothalamus or pituitary disorders, hirsutism and virilization in girls and women.

| | | | | |
|---|---------------------|--------------|-----------------|--------------|
| 2 | DHEAS | 279.4 | 35 - 430 | µg/dL |
| | Serum, Method: CLIA | | | |

Interpretation

Dehydroepiandrosterone sulfate (DHEAS) is a male sex hormone that is present in both men and women. It is useful marker of adrenal gland function. Adrenal tumors (cancerous and non-cancerous) and adrenal hyperplasia can lead to the overproduction of DHEAS. Excess DHEAS may not be noticed in adult men. It can cause early (precocious) puberty in young boys, absence of menstrual periods (amenorrhea) and the development of masculine physical characteristics (virilization) in girls and women such as excess body and facial hair (hirsutism), female baby to be born with genitals that are not distinctly male or female in appearance (ambiguous external genitalia)

| | | | | |
|---|---------------------------|--------------|----------------------------|--------------|
| 3 | Cortisol (8:00 AM) | 15.33 | 8.00 AM: 5.0 – 23.0 | µg/dL |
| | Serum, Method: CLIA | | 4.00 PM: 3.0 - 16.0 | |

Interpretation

Cortisol is a hormone that plays a role in the metabolism of proteins, lipids, and carbohydrates. It affects blood glucose levels, helps maintain blood pressure, and helps regulate the immune system. The level of cortisol in the blood (as well as the urine and saliva) normally rises and falls in a "diurnal variation" pattern. Increased cortisol production may be seen with administration of large amounts of glucocorticosteroid hormones and some tumors ACTH-producing tumors. Increased cortisol production by the adrenal glands, due to a tumor or due to excessive growth of adrenal tissues (hyperplasia). Decreased cortisol production may be seen with an underactive pituitary gland or a pituitary gland tumor that inhibits ACTH production; this is known as secondary adrenal insufficiency. Underactive or damaged adrenal glands (adrenal insufficiency) that limit cortisol production; this is referred to as primary adrenal insufficiency and is also known as Addison disease.



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| 1 | Glucose (Fasting) Fluoride Plasma, Method: Hexokinase | 80.5 | Normal : >70 - 100 Pre - Diabetes: 101 - 126 Diabetes: > 126 | mg/dL |

Interpretation

Glucose is the primary energy source for the body's cells and the only energy source for the brain and nervous system. High levels of glucose most frequently indicate diabetes, but many other diseases and conditions can also cause elevated blood glucose. Hypoglycemia is characterized by a drop in blood glucose to a level where first it causes nervous system symptoms (sweating, palpitations, hunger, trembling, and anxiety), then begins to affect the brain (causing confusion, hallucinations, blurred vision, and sometimes even coma and death).

End Of Report



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