

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

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

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|-----------------------|--|--------------------------|------------------------|
| NAME | : Mrs. SUDHA | PATIENT ID | : 1562190 |
| AGE/ GENDER | : 51 YRS/FEMALE | REG. NO./LAB NO. | : 042407270003 |
| COLLECTED BY | : | REGISTRATION DATE | : 27/Jul/2024 10:01 AM |
| REFERRED BY | : | COLLECTION DATE | : 27/Jul/2024 03:40PM |
| BARCODE NO. | : A0465074 | REPORTING DATE | : 28/Jul/2024 08:40AM |
| CLIENT CODE. | : KOS DIAGNOSTIC SHAHBAD | | |
| CLIENT ADDRESS | : 6349/1, NICHOLSON ROAD, AMBALA CANTT | | |

| Test Name | Value | Unit | Biological Reference interval |
|-----------|-------|------|-------------------------------|
|-----------|-------|------|-------------------------------|

ENDOCRINOLOGY

ADRENOCORTICOTROPIC HORMONE (ACTH)

| | | | |
|---|------|-------|--------------|
| ADRENOCORTICOTROPIC HORMONE (ACTH) | 26.1 | pg/mL | 0.00 - 46.00 |
| by CLIA (CHEMILUMINESCENCE IMMUNOASSAY) | | | |

INTERPRETATION:

| CONDITION | UNITS | REFERENCE RANGE FOR ACTH |
|------------------|-------|--------------------------|
| HEALTHY ADULT | pg/mL | 10 - 46 |
| CORD BLOOD SERUM | pg/mL | 50 - 570 |
| NEW BORN | pg/mL | 10 - 185 |

Adrenocorticotrophic hormone (ACTH), the primary stimulator of adrenal cortisol production, is synthesized by the pituitary in response to corticotropin-releasing hormone (CRH), which is released by the hypothalamus.

Plasma ACTH and cortisol levels are both pulsatile and circadian exhibit peaks (6-8 a.m.) and nadirs (11 p.m.).

Cortisol, the main glucocorticoid, plays a central role in glucose metabolism and in the body's response to stress.

In a patient with hypocortisolism, an elevated adrenocorticotrophic hormone (ACTH) indicates primary adrenal insufficiency, whereas a value that is not elevated is consistent with secondary adrenal insufficiency from a pituitary or hypothalamic cause

In a patient with hypercortisolism (Cushing syndrome), a suppressed value is consistent with a cortisol-producing adrenal adenoma or carcinoma, primary adrenal micronodular hyperplasia, or exogenous corticosteroid use.

Normal or elevated ACTH in a patient with Cushing syndrome puts the patient in the ACTH-dependent Cushing syndrome category. This is due to either an ACTH-producing pituitary adenoma or ectopic production of ACTH (bronchial carcinoid, small cell lung cancer, others). Further diagnostic studies such as dexamethasone suppression testing, corticotropin-releasing hormone stimulation testing, petrosal sinus sampling, and imaging studies are usually necessary to define the ACTH source.

CLINICAL USE

1. Diagnose disorders of the hypothalamic pituitary system
2. Differentiate Cushing's syndrome from normal patients when ACTH levels are low

INCREASED LEVELS

1. Stress





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2.Addison's disease
 3.Pituitary Cushing's disease
 4.ACTH secreting tumor

DECREASED LEVELS

1.Adrenal adenoma
 2.Adrenal carcinoma

*** End Of Report ***





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