

Androstenedione

Synonyms

A4

Clinical Indication

Androstenedione may be useful in investigating the cause of a high testosterone in women. Androstenedione is not as useful as 17-OH progesterone in diagnosis of congenital adrenal hyperplasia (CAH) due to 11 β - or 21-hydroxylase deficiency, but is helpful in management of such patients. In CAH due to 17 β -hydroxysteroid dehydrogenase deficiency male (46 XY) babies have female or ambiguous genitalia and at puberty, marked virilization occurs. The condition is characterised by increased androstenedione relative to that of testosterone.

- Androstenedione is a steroid produced in the ovaries and testes – a small amount is also produced in the adrenal cortex. Androstenedione is peripherally converted to testosterone and oestrone.
- Shows diurnal (daily) variation peaking in the morning - in women levels are highest around the mid-cycle. Levels also increased by exercise and pregnancy.
- Measured to investigate hirsutism (excess hair growth) and virilisation of children and women. In a hirsute female patient with an elevated serum testosterone, an elevated androstenedione with a normal DHEAS indicates the excess androgens are probably of ovarian origin.
- Levels are raised in congenital adrenal hyperplasia due to 21-OH deficiency.

Androstenedione and DHEAS measurement are reflexed on all Southend Hospital female patients with a testosterone level above 4.0 nmol/L.

Part of Profile / See Also

Request Form

Combined Pathology manual Blood form or ICE request

Availability / Frequency of Analysis

Referred test

Analytical method LS-MS/MS

Royal London Hospital, UKAS reg 8285

Clinical Biochemistry, 4th Floor Pathology & Pharmacy Building,

80 Newark Street, Whitechapel, London. E1 2ES

Contact:-

Dr Sarah Pitkin, Principal Clinical Biochemist

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Switchboard: 0207 377 7000 Ext: 61038

Turnaround Time

10 days or 48 hours if urgent and agreed by Clinical Scientist
(excluding weekends)

Patient Preparation

For diagnosis of 17 β -hydroxysteroid dehydrogenase deficiency in infants, stimulation with hCG may be required to achieve serum androstenedione levels that can be measured for accurate diagnosis.

Sample Requirements

Specimen Type

Serum

Volume

Minimum volume 250 μ L

Container



Gold-top (SST) or plain Red-top tube

ONLY

Green-top (Lithium Heparin) tubes are unsuitable for analysis

Reference Range & Units

Units nmol/L

6m – 9 years: <0.8

10 – 15 years*: 2.0 – 5.4

\geq 16 years: 2.0 – 5.4

*Adult reference range. Interpret in line with pubertal status.

Interferences

Interpretation & Clinical

Decision Value (if applicable)

References

Test code

ANDR

Lab Handling

Aliquot 500ul and store in referrals rack at -20°C. Sent daily by courier to Royal London Hospital (First class post acceptable)

Sample stability:-

5 days at 2-8 °C

2 months at -18 to - 26°C



8285

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