SydPath
ST VINCENT'S PATHOLOGY

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CORTISOL INFORMATION SHEET

SUMMARY

Cortisol can be measured in serum, urine or saliva and as part of dynamic tests such as the Short Synacthen Test or Dexamethasone Suppression test. As cortisol levels change with the time of day and are affected by the use of steroid medications, these factors need to be considered when requesting and interpreting cortisol assays. Specifically, there is a wide daily variation in serum and salivary cortisol with a peak between about 7 and 10 am and the lowest values around midnight. From day to day in an individual, even when samples are collected at the same time, there is considerable variation with a within-individual variation (CVi) of approximately 15%.

REFERENCE INTERVALS AND CLINICAL DECISION POINTS

SERUM CORTISOL

8 – 10am: 150 – 520 nmol/L
Lower values are expected later in the day.

SHORT SYNACTHEN TEST

Serum cortisol peak above 420 nmol/L indicates normal response (if female on OCP above 640 nmol/L)

DEXAMETHASONE SUPPRESSION TEST

Serum cortisol (at 8 am the day after 1mg of oral dexamethasone at 11pm): <50 nmol/L

SALIVARY CORTISOL

6 – 10 am: 0 – 22 nmol/L
Late night (11pm – midnight): 0 – 9 nmol/L

24 HOUR URINE CORTISOL

0 - 250 nmol/L

ASSAYS

Serum cortisol (Beckman Coulter assay) is available 24/7 (gold top or lime top tubes)
Salivary cortisol is tested weekly (Roche Elecsys assay)
Urinary cortisol is tested weekly (Siemens Immulite method)