Study on a New Simple Method for the Determination of Cortol
(5 β -pregnan-3 α , 11 β , 17 α , 20, 21-pentol), Cortolone (3 α , 17 α , 20,
21-tetrahydroxy-5 β -pregnan-11-one) and 11-deoxy-Cortol (5 β -
pregnan-3 α , 17 α , 20, 21-tentol) and Their Urinary
Excretion Values in Normal Subjects.

Yoshiharu MOTOMORI

Department of Obst. and Gynec., Okayama University Medical School, Okayama, Japan
(Professor and Chairman Kiyoshi Hashimoto, M.D.)

Cortolone, Cortol and 11-deoxy-Cortol have been not determined as 17-OHCS or Porter-Silber chromogen, although they form one of the main groups of urinary metabolites of glucocorticoids.

In this study, a new simple method for fractional determination of these three cortol compounds in urine was established.

The procedure was carried out as follows:

- 1) Hydrolysis with β -glucuronidase.
- 2) Extraction with ethyl acetate.
- 3) Separation of cortol compounds by Florisil column chromatography.
- 4) Oxidation with periodic acid, 11-deoxy-cortol was converted into etiocholanolone, cortol into 11- β -hydroxy-etiocholanolone, cortolone into 11-keto-etiocholanolone.
- 5) Fractionation of three converted steroids by 6% water alumina column chromatography.
- 6) Colorimetry as Zimmermann chromogen.

Total recovery rate was $66.2 \pm 2.0\%$.

Normal mean excretion values were as follows:

Subjects	Cases	11-deoxy-Cortol	Cortolone	Cortol	Sum Total
Normal Prolif.	20	178.8 $\pm$ 98.2	1120.6 $\pm$ 241.2	734.9 $\pm$ 198.1	2034.3 $\pm$ 145.8
Females Secret.	20	207.6 $\pm$ 58.9	975.2 $\pm$ 132.4	462.8 $\pm$ 169.6	1645.6 $\pm$ 120.3
Normal Males	20	264.9 $\pm$ 49.2	1514.9 $\pm$ 227.3	757.5 $\pm$ 181.2	2537.3 $\pm$ 152.7
Castrated Women	20	199.6 $\pm$ 85.5	876.5 $\pm$ 288.1	560.4 $\pm$ 149.9	1636.5 $\pm$ 141.1

μ g per day $\pm$ C.L.

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