



The New England Journal of Medicine

Established in 1812 as The NEW ENGLAND JOURNAL OF MEDICINE AND SURGERY

VOLUME 297

SEPTEMBER 29, 1977

NUMBER 13

Original Articles

Bayesian Analysis of Electrocardiographic Exercise Stress Testing

681

ROBERT D. RIFKIN AND WILLIAM B. HOOD, JR.

Efficacy of Group A Meningococcal Vaccine in Young Children

686

HEIKKI PELTOLA, P. HELENA MÄKELÄ,
HELENA KÄYHTY, HANNELE JOUSIMIES,
ELJA HERVA, KALEVI HÄLLSTRÖM,
AULIKKI SIVONEN, OLLI-VEIKKO RENKONEN,
OSSI PETTAY, VIENA KARANKO,
PAAVO AHVONEN AND SEPPO SARNA

In Vitro Immune Responsiveness to Vaccinia Virus and HLA

692

RENÉ R. P. DE VRIES,
HANS G. KREEFTENBERG,
HENK G. LOGGEN AND JON J. VAN ROOD

Multicellular Origin of Parathyroid "Adenomas"

696

PHILIP J. FIALKOW, CHARLES E. JACKSON,
MELVIN A. BLOCK AND KENNETH A. GREENAWALD

Special Article

Socioeconomic Factors Affecting the Utilization of Surgical Operations

699

CLAIRE BOMBARDIER, VICTOR R. FUCHS,
LEE A. LILLARD AND KENNETH E. WARNER

Medical Intelligence

Dirofilaria tenuis in Vermont

706

ROBERT W. CHRISTIE

Hyperphosphatemia in Lactic Acidosis

707

LAWRENCE R. O'CONNOR, KEITH L. KLEIN
AND JOHN E. BETHUNE

Changes in Bile Lipids Accompanying Oophorectomy in Premenopausal Woman

709

LYNN J. BENNION

By the London Post

711

JOHN LISTER

Case Records of the Massachusetts General Hospital

Hematuria and Azotemia in an 11-Year-Old Girl

713

SEYMOUR ROSEN AND ROBERT T. McCLUSKEY

Editorials

Further Conquest of the Meningococcus

721

Abdominal Incisions, Sutures and Sacrilege

722

Publish or Perish — or Both

724

Correspondence

Gonadotropin-Releasing Hormone

725

Uremic Sex

725

Cold Agglutinins

727

On the Origin of Transcobalamins

728

Azorean Disease of the Nervous System

729

Jugular-Vein Sampling of ACTH

730

Ergot and Rye

731

How Many CT Scanners?

731

Future Medical Education Already Here

732

Books Received

733

Notices

735

Owned, Published and ©Copyrighted, 1977, by the Massachusetts Medical Society

Second-Class postage paid at Boston, MA and at additional mailing office.
Published weekly at 10 Shattuck, Boston, 02115. Worldwide, \$22.00 per year.

NEJMAG 297 (13) 681-736 (1977)

Though this method has been useful in the differentiation of pituitary and ectopic ACTH excess with the more tedious and less accurate ACTH bioassay, we have not performed this procedure lately. Because of the more sophisticated x-ray procedures in diagnosing pituitary tumors, the availability of the more accurate radioimmunoassay for ACTH and the refined work-up of the pituitary-adrenal axis, it has always been possible recently to make the differential diagnosis between pituitary and ectopic ACTH excess without measuring central ACTH levels.

KLAUS V. WERDER, M.D.

PETER C. SCRIBA, M.D.

Medizinische Klinik Innenstadt

8000 München 2, West Germany

University of Munich

1. Brown RD, Van Loon GR, Orth DM, et al: Cushing's disease with periodic hormonogenesis: one explanation for paradoxical response to dexamethasone. *J Clin Endocrinol Metab* 36:445-451, 1973
2. Gordon D, Becker CE, Levey GS, et al: Efficacy of aminoglutethimide in the ectopic ACTH syndrome. *J Clin Endocrinol Metab* 28:921-923, 1968
3. Lipscomb HS, Nelson DH: A sensitive biologic assay for ACTH. *Endocrinology* 71:13-23, 1962
4. Scriba PC, von Werder K, Richter J, et al: Ein Beitrag zur klinischen Diagnostik des ektopischen ACTH-Syndroms. *Klin Wochenschr* 46:49-51, 1968
5. Scriba PC, Kluge F, Dieterle P, et al: Plasma ACTH activity in bulbus superior venae jugularis, plasma half life of ACTH and diagnostic implications. Third Annual Meeting of the European Society of Clinical Investigation, Scheveningen, 1969, p 70
6. Scriba PC, Hacker R, Dieterle P, et al: ACTH-Bestimmungen im Plasma aus dem Bulbus cranialis venae jugularis. *Klin Wochenschr* 44:1393-1398, 1966

JUGULAR-VEIN SAMPLING OF ACTH

To the Editor: Corrigan and his co-workers (*N Engl J Med* 296:861, 1977) determined the pituitary source of ACTH hypersecretion in Cushing's syndrome in one patient by measuring ACTH in the pituitary effluent after selective catheterization and sampling of the pituitary venous drainage. They suggested that this procedure might be useful in differentiating pituitary from ectopic ACTH excess. They mentioned two other patients in whom jugular-vein ACTH measurements were used to localize the site of ACTH production in Cushing's syndrome: one with a pituitary tumor¹ and another with apparent ectopic ACTH syndrome.²

We agree that in selected cases, ACTH measurements in the jugular vein can be useful in the differential diagnosis of pituitary or ectopic ACTH production. Some years ago we used the Lipscomb-Nelson bioassay method³ to compare ACTH in the jugular vein and the periphery in cases of ectopic ACTH overproduction and found no gradient.^{4,5} In contrast to these three cases, the ACTH levels in the jugular vein in patients with Addison's disease and in adrenalectomized patients with Cushing's disease were significantly higher than those in a peripheral vein.⁶ The cranial bulb of the jugular vein was punctured directly in our patients since it was performed for the determination of cerebral blood flow at the time.