Second Joint Meeting

LAWSON WILKINS PEDIATRIC ENDOCRINE SOCIETY

and

THE EUROPEAN SOCIETY FOR PAEDIATRIC ENDOCRINOLOGY

OFFICERS LWPES

President: Selna L. Kaplan
President-Elect: Maria I. New
Secretary: Salvatore Raiti
Treasurer: Allen W. Root
Directors: Louis Underwood
 Ann Johanson
 Wellington Hung

PAST PRESIDENTS:

C. J. Migeon	1972-1973
W. W. Cleveland	1973-1974
R. M. Blizzard	1974-1975
M. M. Grumbach	1975-1976
J. J. Van Wyk	1976-1977
J. D. Crawford	1977-1978
A. B. Hayles	1978-1979
J. F. Crigler, Jr.	1979-1980
A. M. Bongiovanni	1980-1982
D. A. Fisher	1982-1983
A. M. Di George	1983-1984

PREVIOUS LAWSON WILKINS LECTURERS:

Douglas V. Hubble	1965
James M. McKenzie	1967
David M. Kipnis	1969
Alfred Jost	1971
Andrea Prader	1973
Bert W. O'Malley	1974
Rosalyn S. Yalow	1975
Seymour Reichlin	1976
Robert A. Good	1977
Allan L. Goldstein	1978
Rosalyn S. Yalow	1979
Ernst Knobil	1980
Howard Rasmussen	1981
Harold E. Harrison	1982
Paul McDonald	1983
Nathalie Josso	1984

OFFICERS ESPE

President: Ralph Rappaport (France)
Secretary: Albert Aynsley-Green (Great Britain)
Treasurer: M. L. Aubert (Switzerland)
Council Members: J. L. Chaussain (France)
 Agne Larsson (Sweden)
 Jean-Pierre Bourguignon (Belgium)
 Michael B. Ranke (Germany)

PAST PRESIDENTS:

A. Prader	1962
H. K. A. Visser	1963
J. R. Bierich	1964
W. Hamilton	1965
H. J. Andersen	1966
Z. Laron	1967
W. Swoboda	1968
C. G. Bergstrand	1969
R. Francois	1970
A. Prader	1971
P. Malvaux	1972
D. Aarskog	1973
P. Royer	1974
H. Helge	1975
H. K. A. Visser	1976
C. G. D. Brook	1977
C. Dacou-Voutetakis	1978
W. Teller	1979
G. Chiumello	1980
P. C. Sizonenko	1981
J. Perheentupa	1982
F. Peter	1983
D. Schonberg	1984

Abstracts

1 SHORT TERM ENDOCRINE, METABOLIC AND GROWTH EFFECTS OF GRF 1-29 TREATMENT IN GRF-DEFICIENT SHORT CHILDREN.

Raimund Hümmelink, R. Rohwedder, Michael Hermanussen and Wolfgang G. Sippell. University of Kiel, Department of Pediatrics, D-2300 Kiel, W-Germany.

To assess the growth promoting potential of GRF, we studied so far 4 boys (age 5-13 yrs) with short stature (height SDS -2.2 to -3.8) due to partial HGH deficiency, diagnosed by arginin and insulin stimulation tests and nocturnal HGH secretion profile. None of them received any prior hormonal therapy. Before, after 2 weeks and at the end of 12 weeks of GRF therapy, each child had an i.v. GRF 1-29 bolus test (2 µg/kg, AM, fasted) with determination of plasma HGH, basal serum somatomedin C (SMC) and urinary hydroxyproline excretion (OHP). Lower leg length, measured by knemometry was determined under standard conditions once a week for 3-15 months before and twice a week during GRF treatment. Synthetic GRF 1-29 was given s.c. in a dose of 3-4 µg/kg b.i.d., at 0700 and 1900 h. After 2 weeks of GRF treatment, the peak HGH response after GRF i.v. stimulation increased from (means) 31 to 74 ng/ml. SMC increased from 1.07 to 2.25 IU/ml and OHP from 119 to 210 µg/mg creatinine. Knemometric growth rate increased by 1.6 to 2.8-fold from (means) 0.44 to 0.93 mm/week. Such increased growth rates were never observed in any of these patients during the pre-treatment period. The knemometric growth patterns during GRF therapy appear to be similar to those observed during the initiation of HGH substitution therapy. Our preliminary data suggest that GRF 1-29, given s.c. twice daily, induces longitudinal growth via increased endogenous HGH and SMC secretion and thus may be of therapeutic value in GRF deficient short children.

2 EFFECT OF CONTINUOUS NOCTURNAL GRF INFUSION ON DAYTIME AND SLEEP GH SECRETION IN 7 CASES OF PARTIAL GH DEFICIENCY

P. Rochiccioli, M.T. Sanz, U. Calvet, B. Sablayrolles, G. Dutau and J.X. Coudé CHU Rangueil, Service de Pédiatrie and Sanofi Recherche, Toulouse, France.

Continuous infusion (0.5 µg/kg/h) of synthetic human GRF 1-44 (somatocrine) was administered from 8 p.m. to 8 a.m. in 7 cases of partial growth hormone deficiency, defined as a maximum peak < 10 ng/ml in response to 2 stimulation tests (1 st. T : m = 7.5 ± 2 ng/ml ; 2 nd. T : m = 7.3 ± 3 ng/ml). Patients were 5 boys and 2 girls, average age 12 3/12 yr ; height was 3.1 ± 0.8 SD below mean, bone age was 9 2/12 ± 1 3/12 yr. Polygraphic monitoring was carried out during the night, and blood samples for HGH measurements were drawn every 20 min during the night and the following day. A previous identical study had been carried out in the preceding months with the same children. After GRF infusion, a significant increase in nocturnal GH secretion was observed, mean peak rising from 22.1 ± 14.7 ng/ml to 36.4 ± 13.1 ng/ml, number of peaks from 3.2 to 4.1, and the area under the curve (AUC) from 464.4 ± 501 ng/ml/h to 796.7 ± 419 ng/ml/h. Moreover, diurnal GH secretion increased moderately the day following infusion: Mean peak rose from 9.7 ± 4.4 ng/ml to 16.05 ± 22.2 ng/ml and the AUC from 67.8 ± 39.6 ng/ml/h to 102.2 ± 93.2 ng/ml/h, whereas the number of peaks remained the same. Partial deficiencies with low nocturnal secretion (peak < 10 ng/ml) showed a greater response (AUC : + 139 %), than those with normal nocturnal secretion (peak > 10 ng/ml) (AUC : + 58 %).

These results show that continuous nocturnal GRF infusion increases daytime and sleep GH secretion in partial deficiencies by increase in the AUC and in the number of peaks ; there was no desensitization.