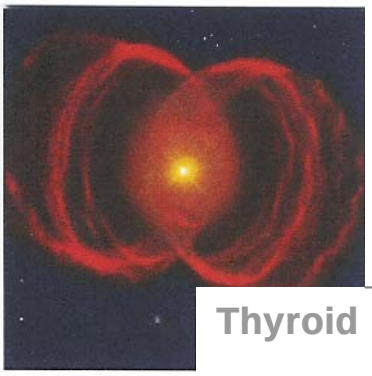

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Literature Service

Thyroid Diseases

Quintessences of Progress in Thyroidology

Issue 57 – June 2005

Up-to-date summaries
of central communications from
relevant publications in the field
of thyroid diseases

Pathogenesis, Epidemiology, Molecular Endocrinology, Clinical studies, Diagnostics, Therapy, Prognoses, Disease progression

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B·R·A·H·M·S Aktiengesellschaft Neuendorfstr. 25 D-16761 Hennigsdorf Phone: +49-3302-883 0 Fax: +49 3302 883 100

57.1 **In the course of follow-up of patients with differentiated thyroid carcinoma (n = 104) rhTSH-Tg testing under L-T_4 was negative (Tg ≤ 0.,9 ng/mL) in 70 patients (1 with lymph-node metastasis), slightly increased (1–5 ng/mL) in 7 (2 with lymph-node metastases), and increased > 5 ng/mL in 27 (11 with lesions detected by ^{131}I scan, 22 with otherwise documented metastatic disease).**

Clinical Value of Different Responses of Serum Thyroglobulin to Recombinant Human Thyrotropin in the Follow-Up of Patients with Differentiated Thyroid Carcinoma

Alessia David et al., and Ettore C. degli Uberti

Department of Biomedical Sciences and Advanced Therapies, Section of Endocrinology, University of Ferrara, Italy

THYROID 15 (3): 267-273, 2005

57.2 **The worse outcome of papillary thyroid microcarcinoma with preoperatively clinically apparent metastases was explained by increased cyclin D1, decreased p27, higher pRb, Ki-67, ssDNA and lower bcl-2 and KAI-1 expression, thus .....**

..... Papillary Microcarcinomas of the Thyroid with Preoperatively Detectable Lymph Node Metastases show significantly Higher Aggressive Characteristics on Immunohistochemical Examination

Yasuhiro Ito et al., and Akira Miyauchi

Department of Surgery, Kuma Hospital, Chuo-ku, Kobe City, Japan

Oncology 68: 87-96, 2005

57.3 **From 10 characteristics in ultrasonograms from 53 patients scored by 17 investigators in 15 centers and analysed by t tests and logistic regression analysis *border character* and *internal echo level* yielded 93% sensitivity and 92% specificity in differentiating papillary thyroid cancer from benign nodules.**

Techniques in Thyroidology: Distinct Diagnostic Criteria for Ultrasonographic Examination of Papillary Thyroid Carcinoma: A Multicenter Study

Hiroki Shimura et al., and Masafumi Kitaoka

Third Department of Internal Medicine, Faculty of Medicine, University of Yamanashi, Yamanashi, Japan

THYROID 15 (3): 251-258, 2005

57.4 **The combination of three genes, cyclin D2, protein convertase 2, and prostate differentiation factor allow the differentiation of follicular thyroid carcinoma from benign follicular adenoma with sensitivity of 100%, specificity of 94.7%, and accuracy of 96.7%!**

Genetic Classification of Benign and Malignant Thyroid Follicular Neoplasia Based on a Three-Gene Combination

Frank Weber et al., and Charis Eng

Human Cancer Genetics Program, The Ohio State University, Columbus, Ohio 43210, USA

J Clin Endocrinol Metab 90 (5): 2512-2521, 2005

57.5 **By comparing survival data from 5,432 papillary thyroid cancer patients operated in the USA between 1988 and 1995, it could be shown that .....**

..... Extent of Thyroidectomy Is Not a Major Determinant of Survival in Low- or High-Risk Papillary Thyroid Cancer

Philip I. Haigh, David R. Urbach, and Lorne E. Rotstein

Department of Surgical Oncology, Kaiser Permanente Los Angeles Medical Center, Los Angeles, Ca 90027, USA

Ann Surg Oncol 12 (1): 81-89, 2005

57.6 **In 663 consecutive patients undergoing thyroidectomy the prevalence of distant thyroid cancer metastases was 4.5% (26 in lung, 11 in bone, 1 in brain, 8 multiple sites). The cumulative survival was 49.5% at 10 and 12.9% at 20 years, significantly worse than in those without.**

Variables Predicting Distant Metastases in Thyroid Cancer
Jonathan R. Clark, Philip Lai, Francis Hall, Anna Borglund, Spiro Eski, and Jeremy L. Freeman
Department of Otolaryngology, Mount Sinai Hospital, Toronto, Ontario, Canada
Laryngoscope 115: 661-667, 2005

57.7 **By sequencing segments of the BRAF gene spanning the T1796A transversion site in papillary thyroid cancers from patients 10 – 21 years of age none contained BRAF T1796A but 7/12 had ret/PTC rearrangements, thus .....**

..... BRAF Mutations are Uncommon in Papillary Thyroid Cancer of Young Patients
K Penko et al., and G. Francis
Department of Pediatrics, Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA
THYROID 15 (4): 320-325, 2005

57.8 **To answer the question whether the recommendation of the National Academy of Clinical Biochemistry (NACB) to decrease the upper limit of the TSH reference range from 4.0 mIU/L to 2.5mIU/L would also be applicable to Germany, a reference population free from thyroid diseases selected according to the NACB criteria (n = 713) was investigated (BRAHMS DYNOtest® TSH 1): Median TSH value 1.21 mIU/L, upper limit of TSH reference range (97.5th percentile) 3.35 mIU/L.**

Where does subclinical hypothyroidism start?
K. Zöphel, G. Wunderlich, Th. Grüning, R. Koch, H. Döge, J. Kotzerke
Klinik für Nuklearmedizin, Klinikum Chemnitz gGmbH, Chemnitz, Germany
Nuklearmedizin 44: 56-61, 2005

To establish reference data for thyroid function tests in a previously iodine-deficient area of Northern Germany, a reference population free of thyroid diseases (n = 1,488) was investigated. Reference intervals: TSH 0.25-2.12 mIU/L, FT_3 3.8-7.0 pmol/L, FT_4 8.3-18.9 pmol/L.

Reference Intervals of Serum Thyroid Function Tests in a Previously Iodine-Deficient Area
Henry Völzke, Dietrich Alte, Thomas Kohlmann, Jan Lüdemann, Matthias Nauck, Ulrich John, and Wieland Meng
Department of Epidemiology and Social Medicine, Ernst Moritz Arndt University, Greifswald, Germany
THYROID 15 (3): 279-285, 2005

57.9 **In 805 subjects of an East German university population a urinary iodine excretion of 109 ± 81 µg/g creatinine showed a borderline adequate iodine intake. The frequency of thyroid nodules was 30%, of goiters 11%.**

Iodine Nutrition, Nodular Thyroid Disease, and Urinary Iodine Excretion in a German University Study Population
V. F. H. Brauer, W. H. Brauer, D. Führer, and R. Paschke
Department of Medicine III, University of Leipzig, Leipzig, Germany
THYROID 15 (4): 364-370, 2005

57.10 **In patients with subclinical hyperthyroidism due to nodular goiter (n = 13) the night surge of the circadian TSH variation was abolished, the basal oxygen consumption increased, and bone mineral density significantly lower than in controls (n = 13), thus .....**

..... Subclinical Hyperthyroidism in Patients with Nodular Goiter Represents a Hypermetabolic State
Jan Kvetny
Section of Endocrinology, Center of Internal Medicine, Esbjerg County Hospital, Esbjerg, Denmark
Exp Clin Endocrinol Diabetes 113: 122-126, 2005

57.11 **By electronical linking laboratory data to pharmacy data the authors were able to identify 177 (18%) of 982 patients with TSH levels of 20 mU/L or higher who had no recorded levothyroxine prescription.**

Missed Hypothyroidism Diagnosis Uncovered by Linking Laboratory and Pharmacy Data
Gordon D. Schiff et al., and Robert A. McNutt
Department of Medicine, John H. Stroger, Jr, Hospital of Cook County, Chicago, IL 60612, USA
Arch Intern Med 165: 574-577, 2005

57.12 **Of 953 delivered gravidas 124 had preterm delivery. Pregnant women with high TSH had a greater than threefold, women with TgAb a more than twofold increase in risk of very preterm delivery.**

The Thyroid and Pregnancy: A Novel Risk Factor for Very Preterm Delivery
Alex Stagnaro-Green, Xinhua Chen, John D. Bogden, Terry F. Davies, and Theresa O. Scholl
Department of Medicine, UMDNJ-New Jersey Medical School, Newark, NJ 17102-6035, USA
THYROID 15 (4): 351-357, 2005

Editorial

Maternal Thyroid Disorders and Preterm Birth: Another Piece of the Puzzle?
Catherine Y. Spong
NICHD, Pregnancy & Perinatology Branch, Bethesda, MD 20892, USA
THYROID 15 (4): 349-350, 2005

57.13 **Screening for autoimmune thyroiditis in children with type 1 diabetes (n = 69) is recommended by measuring TPOAb, TgAb, and TSH at onset and in yearly intervals after the age of 12. 14% of patients will require treatment with L-T_4 before the age of 18.**

Natural course of autoimmune thyroiditis in type 1 diabetes: association with gender, age, diabetes duration, and puberty
O. Kordonouri, R. Hartmann, D. Deiss, A. Grüters-Kieslich
Klinik für Allgemeine Pädiatrie, Charité Universitätsmedizin Berlin, Campus Virchow-Klinikum, Berlin, Germany
Arch Dis Child 90: 411-414, 2005

57.14 **Of 30,798 Graves' disease patients treated with antithyroid drugs 109 (0.35%) developed agranulocytosis. After the introduction of granulocyte colony-stimulating factor for therapy, the recovery time from agranulocytosis was significantly reduced except in severe cases with granulocyte counts below 0.1 x 10^9/L.**

Antithyroid Drug-Induced Agranulocytosis: How Has Granulocyte Colony-Stimulating Factor Changed Therapy?
Junichi Tajiri and Shiro Noguchi
Taijiri Thyroid Clinic, Kumamoto, Japan
THYROID 15 (3): 292-297, 2005

57.15 **116 of 475 patients (24.6%) with hyperthyroidism had relapsed during (n = 12) or within one year after discontinuation of a 18 months treatment with methimazole. 26 of them were continuously treated with methimazole for 10.2 ± 0.5 years. Except for minor allergic symptoms this therapy was safe and effective.**

Effect of long-term continuous methimazole treatment of hyperthyroidism: comparison with radioiodine
F. Azizi, L. Ataie, M. Hedayati, Y. Mehrabi, and F. Sheikholeslami
Endocrine Research Center and the Division of Cardiology, Taleghani Medical Center, Shaheed Beheshti University of Medical Sciences, Theran, I.R. Iran
Eur J Endocrinol 152: 695-701, 2005

57.16 **Clinical hypothyroidism is associated with hyperhomocysteinemia. In contrast homocysteine levels were not increased or even slightly decreased in methimazole-induced (n = 11) hypothyroidism (TSH 10 – 20 mIU/L).**

Methimazole-induced hypothyroidism paradoxically decreases homocysteine
Kathleen M. Colleran, Leonard A. Romero, Dalice A. Upton, Mark R. Burge
Department of Internal Medicine, University of New Mexico, Albuquerque, NM 87131, USA
Metab Clin Experimental 54: 460-465, 2005

57.17 **It was shown that certain weight-reducing herbal medicines contain L-T_3 and L-T_4 and thus can cause thyrotoxic symptoms (12 patients) and elevated FT_3, FT_4 and low Tg levels.**

Thyrotoxicosis Caused by Weight-Reducing Herbal Medicines
Hidemi Ohye et al., and Masahiro Sugawara
Kuma Hospital, Hyogo, Japan
Arch Intern Med 165: 831-834, 2005

57.18 **Of 1,705 new users of lithium (age ≥65) almost 6 % needed additional L-thyroxine therapy, thus increased vigilance and continued monitoring of thyroid function is necessary in this group of patients.**

New Thyroxine Treatment in Older Adults Beginning Lithium Therapy
Kenneth I. Shulman et al., and Paula Rochon
Department of Psychiatry, Sunnybook and Women's College Health Sciences Centre, Toronto, Ontario, Canada
Am J Geriatr Psychiatry 13: 299-304, 2005

57.19 **Physiologic combinations of L-T_4 plus L-T_3 do not offer objective advantage over L-T_4 alone but 18 of 28 respectively 19 of 46 and 24 of 46 patients preferred combined treatment.**

Thyroid Hormone Replacement Therapy in Primary Hypothyroidism: A Randomized Trial Comparing L-Thyroxine plus Liothyronine with L-Thyroxine Alone
Héctor F. Escobar-Morreale et al., and José Sancho
Department of Endocrinology, Hospital Ramón y Cajal, Madrid, Spain
Ann Intern Med 142: 412-424, 2005

Combined Therapy with Levothyroxine and Liothyronine in Two Ratios, Compared with Levothyroxine Monotherapy in Primary Hypothyroidism: a Double-Blind, Randomized, Controlled Clinical Trial
Beate C. Appelhof et al., and Wilmar M. Wiersinga
Department of Endocrinology and Metabolism, Academic Medical Center of the University of Amsterdam, Amsterdam, The Netherlands
J Clin Endocrinol Metab 90 (5): 2666-2674, 2005

57.20 **Numerous clinical trials are being performed towards the development of new thyroid diagnostics. Why does nobody care for new thyroid therapeutics such as .....**

.....Selective Agonists and Antagonists to Thyroid Hormone Action
Zaki Kraiem
Technicon Faculty of Medicine, Carmel Medical Center, Haifa, Israel
THYROID 15 (4): 336-339, 2005

Reviews

R 57-1 **Thyrotropin receptor antibodies: new insights into their actions and clinical relevance**

Takao Ando, Rauf Latif, Terry F. Davies
Department of Medicine, Mount Sinai School of Medicine, New York, NY 10029, ZSA
Best Pract Res Clin Endocrinol Metab 19 (1): 33-52, 2005

R 57-2 **Thyroid hormone receptor mutations and disease: beyond thyroid hormone resistance**

Sheue-yann Cheng
Laboratory of Molecular Biology, National Cancer Institute of Health, Bethesda, MD 20892-4264, USA
Trends Endocrinol Metab 16 (4): 176-182, 2005

R 57-3 **Thyroid peroxidase autoantibodies in euthyroid subjects**

Mark F. Prummel, Wilmar M. Wiersinga
Department of Endocrinology and Metabolism, Academic Medical Center, Amsterdam, The Netherlands
Best Pract Res Clin Endocrinol Metab 19 (1): 1

R 57-4 **A clinical and therapeutic approach to thyrotoxicosis with thyroid-stimulating hormone suppression only**

Giovanni Papi, Elizabeth N. Pearce, Lewis E. Braverman, Corrado Betterle, and Elio Roti
Section of Endocrinology, Diabetes and Nutrition, Boston Medical Center, Boston, Massachusetts 02118, USA
Am J Med 118: 349-361, 2005

R 57-5 **Hashimoto's encephalopathy: myth or reality? An endocrinologist's perspective**

Vahab Fatourechi
Division of Endocrinology, Diabetes, Metabolism & Nutrition, Mayo Clinic College of Medicine, Rochester, MN, USA
Best Pract Res Clin Endocrinol Metab 19 (1): 53-66, 2005

R 57-6 **Screening for thyroid disease in pregnancy**

J. H. Lazarus, L. D. Premawardhana
Department of Medicine, Llandough Hospital, Cardiff CF64 2 XX, UK
J Clin Pathol 58 (5): 449-452, 2005
