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CLINICAL CHEMISTRY AND LABORATORY MEDICINE

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Contents

Editorial

Callum G. Fraser

Assuring the quality of examinations using faecal immunochemical tests for haemoglobin (FIT) — 245

Refers to articles on pp 307, e41

Review

Dong-Sheng Lian, Xiang-Yuan Chen, Hua-Song Zeng and Yan-Yi Wang

Capillary electrophoresis based on nucleic acid analysis for diagnosing inherited diseases — 249

Mini Reviews

Pascal Kintz

Negative hair test result after long-term drug use. About a case involving morphine and literature review — 267

Ilja Burdman and Bjoern B. Burckhardt

Prorenin and active renin levels in paediatrics: a bioanalytical review — 275

Opinion Paper

Michael Vogeser

From therapeutic drug monitoring to total drug monitoring and drug-omics — 287

Perspectives

Federica Braga, Sara Pasqualetti, Elena Aloisio and Mauro Panteghini

The internal quality control in the traceability era — 291

Genetics and Molecular Diagnostics

Deborah A. Payne, Graciela Russomando, Mark W. Linder, Katarina Baluchova, Tester Ashavaid, Werner Steimer and Parviz Ahmad-Nejad, the IFCC Committee for Molecular Diagnostics (C-MD)

External quality assessment (EQA) and alternative assessment procedures (AAPs) in molecular diagnostics: findings of an international survey — 301

General Clinical Chemistry and Laboratory Medicine

Shane O'Driscoll, Carolyn Piggott, Helen Bruce and Sally C. Benton

An evaluation of ten external quality assurance scheme (EQAS) materials for the faecal immunochemical test (FIT) for haemoglobin — 307

Ellis T. Aune, Laura E. Diepeveen, Coby M. Laarakkers, Siem Klaver, Andrew E. Armitage, Sukhvinder Bansal, Michael Chen, Marianne Fillet, Huiling Han, Matthias Herkert, Outi Itkonen, Daan van de Kerkhof, Aleksandra Krygier, Thibaud Lefebvre, Peter Neyer, Markus Rieke, Naohisa Tomosugi, Cas W. Weykamp and Dorine W. Swinkels

Optimizing hepcidin measurement with a proficiency test framework and standardization improvement — 315

Evanthia Monogioudi, Gustavo Martos, Joanna Sheldon, Pier Luigi Meroni, Stefanie Trapmann and Ingrid Zegers

Development of a certified reference material for anti- β 2-glycoprotein I IgG – commutability studies — 325

Bo Yang, Yun Xie, Francesco Garzotto, Ghada Ankawi, Alberto Passannante, Alessandra Brendolan, Raffaele Bonato, Mariarosa Carta, Davide Giavarina, Enrico Vidal, Gregori Dario and Claudio Ronco

Influence of patients' clinical features at intensive care unit admission on performance of cell cycle arrest biomarkers in predicting acute kidney injury — 333

Stefania Sella, Luciana Bonfante, Maria Fusaro, Flavia Neri, Mario Plebani, Martina Zaninotto, Andrea Aghi, Georgie Innico, Giovanni Tripepi, Alberto Michielin, Tancredi Prandini, Lorenzo A. Calo and Sandro Giannini

Efficacy of weekly administration of cholecalciferol on parathyroid hormone in stable kidney-transplanted patients with CKD stage 1–3 — 343

Graeme Eisenhofer, Timo Deutschbein, Georgiana Constantinescu, Katharina Langton, Christina Pamporaki, Bruna Calsina, Maria Monteagudo, Mirko Peitzsch, Stephanie Fliedner, Henri J. L. M. Timmers, Nicole Bechmann, Maria Fankhauser, Svenja Nölting, Felix Beuschlein, Anthony Stell, Martin Fassnacht, Aleksander Prejbisz, Jacques W. M. Lenders and Mercedes Robledo

Plasma metanephrines and prospective prediction of tumor location, size and mutation type in patients with pheochromocytoma and paraganglioma — 353

Armando Tripodi, Veena Chantarangkul, Cristina Novembrino, Erica Scalabrino, Massimo Boscolo-Anzoletti, Marigrazia Clerici, Federica Rossi and Flora Peyvandi

Emicizumab, the factor VIII mimetic bi-specific monoclonal antibody and its measurement in plasma — 365

Reference Values and Biological Variations

Tamara van Donge, Eveline Staub, Andrew Atkinson, Verena Gotta, John van den Anker, Lorenz Risch, Tatjana Welzel and Marc Pfister

Age appropriate reference intervals for eight kidney function and injury markers in infants, children and adolescents — 373

Cardiovascular Diseases

Christina C. Rolling, Julia Tomada, Andreas M. Frölich, Brigitte Holst, Katharina Holstein, Minna Voigtländer, Snjezana Janjetovic, Munif Haddad, Thomas Renné, Jens Fiehler, Carsten Bokemeyer, Thierry Rolling and Florian Langer

Comparison of acetylsalicylic acid and clopidogrel non-responsiveness assessed by light transmittance aggregometry and PFA-100® in patients undergoing neuroendovascular procedures — 383

Seraina R. Hochstrasser, Kerstin Metzger, Alessia M. Vincent, Christoph Becker, Annalena K. J. Keller, Katharina Beck, Sebastian Perrig, Kai Tisljar, Raoul Sutter, Philipp Schuetz, Luca Bernasconi, Peter Neyer, Stephan Marsch and Sabina Hunziker

Trimethylamine-N-oxide (TMAO) predicts shortand long-term mortality and poor neurological outcome in out-of-hospital cardiac arrest patients — 393

Ashish Verma and Rehan Qayyum

Non-lactate strong ion difference and cardiovascular, cancer and all-cause mortality — 403

Infectious Diseases

Evelyne Huyghe, Hilde Jansens, Veerle Matheussen, Ilse Hoffbauer, Herman Goossens and Bart Peeters
Performance of three automated SARS-CoV-2 antibody assays and relevance of orthogonal testing algorithms — 411

Federico Cabitza, Andrea Campagner, Davide Ferrari, Chiara Di Resta, Daniele Ceriotti, Eleonora Sabetta, Alessandra Colombini, Elena De Vecchi, Giuseppe Banfi, Massimo Locatelli and Anna Carobene
Development, evaluation, and validation of machine learning models for COVID-19 detection based on routine blood tests — 421

Alberto Dolci, Cristina Robbiano, Elena Aloisio, Mariia Chibireva, Ludovica Serafini, Felicia Stefania Falvella, Sara Pasqualetti and Mauro Panteghini
Searching for a role of procalcitonin determination in COVID-19: a study on a selected cohort of hospitalized patients — 433

Eva Heilmann, Claudia Gregoriano, Yannick Wirz, Charles-Edouard Luyt, Michel Wolff, Jean Chastre, Florence Tubach, Mirjam Christ-Crain, Lila Bouadma, Djillali Annane, Pierre Damas, Kristina B. Kristoffersen, Carolina F. Oliveira, Daiana Stolz, Michael Tamm, Evelien de Jong, Konrad Reinhart, Yahya Shehabi, Alessia Verduri, Vandack Nobre, Maarten Nijsten, Dylan W. deLange, Jos A.H. van Oers, Albertus Beishuizen, Armand R.J. Girbes, Beat Mueller and Philipp Schuetz
Association of kidney function with effectiveness of procalcitonin-guided antibiotic treatment: a patient-level meta-analysis from randomized controlled trials — 441

Erratum

Markus Herrmann, Johannes Peter Schmidt, Natalia Umanskaya, Alexandra Wagner, Omid Taban-Shomal, Thomas Widmann, Graziana Colaianni, Britt Wildemann and Wolfgang Herrmann

Corrigendum to: The role of hyperhomocysteinemia as well as folate, vitamin B6 and B12 deficiencies in osteoporosis – a systematic review — 455

Online Only Content

<https://www.degruyter.com/view/j/cclm.2020.59.issue-2/issue-files/cclm.2020.59.issue-2.xml>

Letter to the Editors

Xavier Bossuyt, Jan Damoiseaux, Niels Rasmussen, Pieter van Paassen, Bernard Hellmich, Bo Baslund, Daniel Blockmans, Pieter Vermeersch, Marcos Lopez-Hoyos, Martine Vercammen, Elisa Barret, Friederike Hammar, Ulrich Leinfelder, Michael Mahler, Nina Olschowka, Dirk Roggenbuck, Wolfgang Schlumberger, Roger Walker, Johan Rönnelid, Jan-Willem Cohen Tervaert, Elena Csernok and Walter Fierz for (i) the European Federation of Laboratory Medicine (EFLM) Task and Finish Group “Autoimmunity Testing,” (ii) the European Autoimmune Standardization Initiative (EASI) and the (iii) European Consensus Finding Study Group on autoantibodies (ECFSG)

Harmonization of antineutrophil cytoplasmic antibodies (ANCA) testing by reporting test resultspecific likelihood ratios: position paper — e35

Carolyn Piggott, Zinab Shugaa and Sally C. Benton
Independent internal quality control (IQC) for faecal immunochemical tests (FIT) for haemoglobin: use of FIT manufacturers’ IQC for other FIT systems — e41

Jason Wei Ming Tham, Shu Chi Ng, Chean Nee Chai, Siyu Png, Eunice Jia Min Tan, Li Jie Ng, Rui Ping Chua, Musa Sani, Donald Chiang, Ker Xin Tan, Nancy Wen Sim Tee, Roland Jureen, Shaun S. Tan, Gabriel Yan, Benedict Yan and Chun Kiat Lee
Parallel testing of 241 clinical nasopharyngeal swabs for the detection of SARS-CoV-2 virus on the Cepheid Xpert Xpress SARS-CoV-2 and the Roche cobas SARS-CoV-2 assays — e45

Anna Schaffner, Lorenz Risch, Myriam Weber, Sarah Thiel, Katharina Jüngert, Michael Pichler, Nadia Wohlwend, Thomas Lung, Michael Ritzler, Dorothea Hillmann, Sandra Copeland, Harald Renz, Matthias Paprotny and Martin Risch
Sustained SARS-CoV-2 nucleocapsid antibody levels in nonsevere COVID-19: a population-based study — e49

Stelios F. Assimakopoulos, Andreas Emmanuil, Asimina Tsimeka, Theodora Chalkidi, Markos Marangos and Charalambos Gogos
Evidence for increased circulating procoagulant phospholipids in patients with COVID-19 pneumonia and their prognostic role — e53

Eloísa Urrechaga, Urko Aguirre, Pablo Pedro España and Luis García de Guadiana
Complete blood counts and cell population data from Sysmex XN analyser in the detection of SARS-CoV-2 infection — e57

Lei Zhang, Fengjuan Han, Xiao Liu, Chunxia Xie, Kegang Tian, Qingqing Bi, Mingju Hao and Xiaofeng Mu
Macro creatine kinase in an asymptomatic patient: a case report — e61

Gabriele Halwachs-Baumann and Birgit Waininger
Implementation of pre-labelled barcode tubes and the GeT-System in a general hospital for the exact documentation of the time of venous blood sample and improvement of sample quality — e65

Xavier Bossuyt, Koen Poesen, Ben Sprangers, Martin Reynders, Martine Vercammen and Michel Delforge
Determination of free light chains: assaydependent differences in interpretation — e69

Evangelos Karamitrousis, Ioanna Balgkouranidou, Nikolaos Xenidis, Kyriakos Amarantidis, Eirini Biziota, Triantafyllia Koukaki, Gregorios Trypsianis, Anastasios Karayiannakis, Heleni Bolanaki, Ekaterini Chatzaki, Georgios Kolios, Evi Lianidou, Maria Lambropoulou and Stylianos Kakolyris
Association between SOX17, Wif-1 and RASSF1A promoter methylation status and response to chemotherapy in patients with metastatic gastric cancer — e73

Janne Cadamuro, Cornelia Mrazek, Martin H. Keppel,
Thomas K. Felder, Hannes Oberkofler and
Elisabeth Haschke-Becher

**Effect of two organizational interventions on the
frequency of haemoglobin A1c and erythrocyte
sedimentation rate testing — e77**

Jenny M. Hall, Claire F. Fowler, M. Anne Pollock and
Sandra M. MacRury

**Haemoglobin A_{1c} determination from dried blood spots
prepared with HemaSpot™ blood collection devices:
comparison with fresh capillary blood — e79**

Quentin Despinasse, Luc Choisnard, Patrice Faure,
Denis Guicherd, Eric Peyrin, Corinne Ravelet and
Benoit Chovelon

**Stability of catecholamines in whole blood:
influence of time between collection and
centrifugation — e83**

Endocrinology

Cod: T123

ANTI-TPO AND ANTI-TG ANTIBODIES IN AUTOIMMUNE THYROID DISEASES DIAGNOSIS

D. Janicevic-Ivanovska¹, S. Shubeska-Stratrova², S. Domazetovska¹, B. Gorgoska⁴, N. Evtimovska³

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Background: Irrespective of the recommendations of the use of serum TSH as a cornerstone of thyroid function testing, the laboratory diagnosis and monitoring of thyroid disease are based on the thyroid panel including anti-TPO and anti-TG, which are essential to manage thyroid diseases especially autoimmune thyroid diseases Graves' disease and Hashimoto's thyroiditis.

Methods: In this clinical study prospective assessment of the morning serum anti-TPO and anti-TG concentrations were performed in 50 subjects with Graves' disease and 50 with Hashimoto's thyroiditis and 40 healthy subjects. Serum concentrations of anti-TPO and anti-TG were determined by chemiluminescence immunoassay of CLIA methods analyzer Immulite 2000.

Results: Patients with Graves' disease and Hashimoto's thyroiditis showed significantly higher concentrations of anti-TPO and anti-TG compared with healthy individuals ($P < 0.001$).

Anti-TPO values in the control group were 3.7 ± 0.46 IU/ml and anti-TG values were 10 ± 0.05 IU/ml, significantly lower ($P < 0.001$) compared to anti-TPO values (238.5 ± 7.95 IU/ml) in Graves' disease and (333.3 ± 8.55 IU/ml) in Hashimoto's thyroiditis.

Anti-TG values in the control group were 10 ± 0.55 IU/ml, significantly lower ($P < 0.001$) compared to anti-TG values (42 ± 4.95 IU/ml) in Graves' disease and (53.3 ± 0.55 IU/ml) in Hashimoto's thyroiditis.

Conclusion: Serum concentrations of anti-TPO and anti-TG respectively as organ specific autoantibodies are very precious parameters that enable precise and fast Graves' disease and Hashimoto's thyroiditis diagnosis.