Helin Tuukka, EFLM Bursary Recipient

First, I would like to express my sincere gratitude to the EFLM, giving me the opportunity to attend this congress. Generally, the congress was well organized with a wide variety of topics. The magnificent opening lecture by Prof. Dennis Lo, deserves a special mention as well as the lively debate on vitamin D measurement (Pro: Roger Bouillon, Contra, Ian Young) and the practical and important EFLM-EAS consensus recommendation on non-fasting dyslipidemia testing, illustrated by Michel Langlois.

I presented two posters at the congress and received positive feedback. I had the honor to present one of them as part of a poster walk session.

Since my research field is coagulation, I was interested in the debate on monitoring direct oral anticoagulants (DOAC), with Prof. Lotta Joutsi-Korhonen from Finland taking the pro-stance and Prof. Grzegorz Grzesik from Poland taking the contra-stance.

Dr. Joutsi-Korhonen started her presentation by comparing the DOAC with warfarin. The INR is used for warfarin regular monitoring due to the narrow therapeutic range. With the direct oral anticoagulants too, while routine coagulation monitoring is currently not recommended, there are a number of clinical situations where the monitoring is mandatory. In case of complications with DOAC treatment, which are numerous (treatment failure, trauma, emergency procedure, bleeding or overdose), it is critical to know the DOAC level. Coagulation screening tests PT and APTT are not suitable, but thrombin time and anti-Xa assays should be used. Finally, there is a consensus that blood count, liver and renal function should always be monitored.

Prof. Grzesik started his presentation on DOAC monitoring in selected cases, not routinely. Both speakers agreed on the need for adequate laboratory monitoring of drug effect. Furthermore, in the routine practice very few requests about DOAC are observed; in prof Grzesik laboratory, in the year 2016 only two requests for dabigatran concentration have been received.

At the end of the debate, the chair suggested a consensus; patients should be always monitored to assess liver and renal function, with coagulation monitoring in selected cases, not routinely. Both speakers agreed on this. I’m quite partial in my assessment, since Lotta Joutsi-Korhonen is my supervisor, but I think that there are many arguments in favor of DOAC monitoring and that her thesis emerged as winner in this debate.

Steven De Keukeleire, EFLM Bursary Recipient

The 4th joint EFLM-UEMS Congress was held from the 21nd to 24nd of September 2016 in Warsaw, Poland. The conference was organized by the IFCC auspices, the honorary patronage of the Mayor of Warsaw, the Medical University of Warsaw and Collegium Medicum of the Nicolaus Copernicus University. The congress was attended by more than 450 scientists and physicians. The programme covered a large range of clinically important emerging topics in laboratory Medicine focusing on the Clinical Interface between the laboratory and clinical practice. Hot topics about cardiovascular disease, diabetic kidney disease, therapeutic drug monitoring, pediatric laboratory medicine, autoimmunology, biomarkers and molecular diagnostics were discussed.

One session was dedicated to “Trends in pediatric laboratory medicine” and included presentations about pediatric obesity, newborn screening, pediatric reference intervals related to therapeutic drug monitoring (TDM) of antibiotics.

Childhood obesity is a worldwide problem for its difficult to manage. It often results in diabetes. There is a need for adequate laboratory assessment by measuring cholesterol (total cholesterol and LDL-levels), glucose (using Hb A1C concentrations), and liver parameters as well (transaminases). Childhood obesity implies a role of the intestine in obesity.

Newborn screening (NBS) for lysosomal diseases (Fabry, Pompe, Gaucher, MPS type I) has gained interest due to the increasing number of therapeutic options. The analytical performances of the laboratory methods are essential to improve the clinical outcome. Despite the great improvement, concerns remain about the appropriateness of screening methods, the effectiveness of therapies and the overall costs involved.

To define pediatric reference intervals a great initiative was the CALIPER (Canadian Laboratory Initiative on Paediatric Reference Intervals) project resulting in a usable database with normal reference values for a wide range of biochemical markers between 0 and 18 years of age.

Another topic discussed was the antibiotic Meropenem, usage in the neonatal population. There is a big need for adequate TDM in newborns. The biochemical stability of Meropenem in biological samples is crucial since the measurement is performed in specialized laboratories and there is the need for adequate TDM in newborns. There is the need for adequate TDM in newborns.
EFLM Publications in 2016: An Update
by Maria Stella Graziani, Chair of the Communications Committee

Three more papers have been published by EFLM functional units since the last issue; please find below the list. The papers are freely downloadable at the dedicated page of the EFLM website (www.eflm.eu/index.php/eflm-publications.html)

Positions & Opinion Papers

An interesting opinion paper that investigates the reasons why clinical practice guidelines are so poorly followed both by clinicians and by laboratory medicine. Few guidelines have been written for laboratories and the ones that affect laboratories are inadequate: we need to change this culture and ensure that we are involved in both the arenas of diagnostic research and guideline writing.

Reviews & Surveys

The results of the survey indicate that there are some harmonisation initiatives in place in Europe, but these initiatives are not coordinated. Considering that the analytical phase is already covered by specific projects, EFLM is focusing its harmonisation efforts on the pre- and post-analytical phases.


The paper reports about the first initiative of the Task Force: a questionnaire administered to all National Societies of the Federation and other stakeholders.

EFLM CORNER

News from the EFLM Education and Training Committee

A head of the 4th Joint EFLM-UEMS Congress the members of the EFLM Education and Training Committee (C-ET) discussed different ongoing projects together with their Chair Ralf Lichtinghagen.

Recently the Task Finish Group Continuous Professional Development (TFG-CPD) started with Elizabeta Topic (chair) and additional 17 experts from the different EFLM member countries it work with. The main tasks of the group are on one hand the preparation of guidelines for the accreditation of CPD events and on the other hand the guidelines for certification of European Specialists in Laboratory Medicine. An action plan suggested from the chair was discussed, initial results are now expected at the end of this year. All members of the C-ET verified during the session that the generation of an EFLM CPD crediting system will be an important step especially for the whole group of non-medical laboratory specialists who often have no access to any kind of existing (e.g. national) crediting system.

The Working Group Congresses and Postgraduate Education (WG-CPE) presented under the chair Gustav Kovac different ongoing projects. Of main importance the group suggested the final development of an Educational and Training Exchange Program for laboratory professionals, which was exemplary initiated by the WG group member Evgenija Homsk. The EFLM Executive Board just endorsed this project approval by the EFLM EB at the end of the year.

Daniel Rajdl, chair of the Working Group Distance Education (WG-DE), reported about his evaluation of the last webinars, which were successful events. Recordings of the sessions were, especially on YouTube, downloaded from interested persons all over the world. Actually the WG is looking forward the recording of selected sessions of the 4th EFLM-UEMS Congress to present it later for educational purposes.
Biomarkers in Guiding Treatment of Heart Failure
Nov 17, 2016; 18:00 CET - Speaker: Alan S. Maisel; Moderator: Evgenija Homsak

About the speaker: Alan S. Maisel is Professor of Medicine at the University of California, San Diego (UCSD) and Director of the Coronary Care Unit and Heart Failure Program at the VA San Diego Healthcare System in La Jolla, California. Prof Maisel is active on the faculty at UCSD where he won numerous teaching awards; he has just completed a ten-year stint as Associate Editor of the Journal of the American College Cardiology.

Prof Maisel is considered one of the globally recognized experts on cardiac biomarkers and has over 400 scientific publications. He has authored several ground-breaking manuscripts that have paved the way for development of diagnostic tools for patients with congestive heart failure. In particular, he was the leading investigator on studies that brought the use of BNP into clinical practice and was the lead investigator on seven multicentre biomarker trials.

Prof Maisel is actually working to delineate the clinical role of sST2 levels in clinical practice for guiding treatment.

Summary. Heart failure represents an important clinical problem and the accuracy of diagnosis by clinical means alone is often inadequate, especially in the early, asymptomatic stages of the disease. For these reasons, there is an increasing interest in the development of cardiovascular biomarkers useful for diagnosis, prognosis, follow-up of patients with heart failure and to possibly guide treatment as well. In this talk, three biomarkers will be examined: natriuretic peptides, high sensitivity troponins and sST2.

Natriuretic peptides (NPs) (BNP and NTproBNP) are well recognized markers for the diagnosis of heart failure and have been included in clinical guidelines. The limitations for their use include the wide variability of their concentration within subjects and the possible non-specific increase. Additionally, their clinical value is questionable in patients receiving Entresto (a drug that inhibits breakdown of NPs). High sensitivity troponins in the setting of acute heart failure (and maybe chronic) are a marker of subendocardial necrosis and may indicate a worse prognosis. It can be postulated that drugs like nitrates could be used in heart failure treatment more efficiently when levels of high sensitivity troponin are high.

Finally, sST2 is a marker of fibrosis and is elevated in virtually all patients with heart failure. In the acute setting, it defines a subset of patients in need of advanced treatment to avoid rehospitalization. In the chronic setting, titrating treatment to a sST2 level below 35 ng/ml appears to mitigate the risk, even if NPs are not decreasing. The data from “Entresto” clinical trial seem to suggest that sST2 levels are useful both to select patients eligible for the treatment with the drug and to dose it and for monitoring purposes as well.

Save the Date. Next scheduled EFLM webinars:
Case report: Patient with shock and multiorgan failure
Dec 13, 2016; 18:00 CET - Speaker: Anna Merino

Reliable estimates of biological variation – the way forward
May 9, 2017; 18:00 CET - Speaker: Aasne Karine Aarsand