

NEIGHBORING COUNTRIES: THE SAME PROFESSIONAL AIM IN DEVELOPMENT LABORATORY MEDICINE

ISTI PROFESIONALNI CILJEVI U RAZVOJU LABORATORIJSKE MEDICINE U SUSEDNIM ZEMLJAMA

Nada Majkić-Singh

Society of Medical Biochemists, Belgrade, Serbia

Summary

During **15th Belgrade Symposium for Balkan Region** (April 11 and 12, 2019, Belgrade, www.dmbj.org.rs) Society of Medical Biochemists of Serbia organized scientific and professional program with aim to discuss laboratory medicine topics of mutual interest for all the countries of the Region, such as:

- Laboratory Medicine Planning and Organization
- Type of Medical Laboratory and Strategy
- Laboratory Medicine Management
- Leadership Skills
- Accreditation and Competences
- Environmental Health and Safety
- Laboratory Standards in Balkan Countries
- Experiences of Young Scientists
- Students Achievements

Together with the countries from Balkan Region the countries from our neighborhood as Italy, Austria, Hungary, Cyprus and Israel have been invited to discuss this important topics and exchange the mutual experiences with aim to improve the laboratory medicine in our countries and to help our colleagues to improve daily laboratory practice in our countries. Also participation in the Symposium took colleagues from France and Belgium.

Keywords: Belgrade Symposium, Balkan region, neighbouring countries, laboratory medicine, development

Kratak sadržaj

Za vreme **15th Belgrade Symposium for Balkan Region** (april 11 i 12, 2019, Beograd) (www.dmbj.org.rs) Društvo medicinskih biohemičara Srbije organizovalo je naučni i profesionalni program sa ciljem da se diskutuje problematika laboratorijske medicine od zajedničkog interesa za sve zemlje regiona kao što su:

- Planiranje i organizacija laboratorijske medicine
- Tipovi medicinskih laboratorija i strategija
- Rukovođenje laboratorijama
- Veštine rukovođenja
- Akreditacija i kompetencija
- Zaštita okoline i osoblja
- Laboratorijski standardi u Balkanskim zemljama
- Iskustva mladih saradnika
- Očekivanja studenata

Osim zemalja iz Balkanskog regiona na Simpozijumu učestvuju kolege iz susednih zemalja: Italije, Mađarske, Kipra i Izraela sa ciljem da izlože iskustva u svojim zemljama radi doprinosa unapređenju struke u celini. U radu Simpozijuma učestvuju i kolege iz Francuske i Belgije.

Ključne reči: Beogradski simpozijum, balkanski region, susedne zemlje, laboratorijska medicina, razvoj

Introduction

During **15th Belgrade Symposium for Balkan Region** (April 11 and 12, 2019, Belgrade, www.dmbj.org.rs) Society of Medical Biochemists of Serbia organized scientific and professional program with aim to discuss topics of mutual interest for all the countries of the Region, such as:

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Also, one of the Symposium aims is to connect young scientists from our Region as well as students of Medical and Clinical Biochemistry.

The Scientific and Organizing Committee have been consisted of representatives from Serbia, and presidents of national societies and national EFLM representatives of each participating country. We thank our colleagues from Italy, Belgium, France, Slovenia, Austria, Hungary, Cyprus and Israel for accepting the membership in the Scientific and Organizing Committee of the 15th Belgrade Symposium and their help in organization a successful meeting.

Symposium topics discussed

During Symposium eight part of specific lecture have been devoted to the »Type of medical laboratory and strategy« with point to e-Health tools for the medical lab for better outcomes, Digital tool in laboratory medicine and Machine learning and laboratory medicine (1–3).

Technology tools are increasingly automating highly standardized and repetitive routine laboratory tasks while wearable technologies, connected diagnostic and monitoring tools are facilitating the delivery of care to patients. eHealth changes the traditional delivery of healthcare. The digital healthcare transformation is taking place globally, the future is connected, patient centered, mobile and social. This

digital paradigm is exerting a profound impact in Lab medicine. Digital lab medicine is totally disruptive because the changes in the capabilities to integrate and visualize complex diagnostic data. The new tools that can give us a much more high-definition view of the patients; because the wearable sensors that track a wide range of important physiologic parameters continuously. The digitization of health care and lab medicine can also improve the clinician-medical biologist-patient relationships, allowing more time for human interaction when care is boosted by digital technologies that better individualize diagnostics and patient monitoring (1).

The use of digital technologies and mobile health (mHealth) applications is driven by the continuous development of connected devices, sensors and digital health applications. Digital technologies participate in precision medicine with potential impact on prevention, early diagnosis and monitoring of chronic diseases. An increasing evidence shows that mHealth technologies decreases the number of disease-related health outcomes in patients suffering from chronic diseases in comparison to regular care. In the case of diabetes, significant improvements were observed in compliance with better control of glucose levels, compliance, and stress levels. Process improvements were also reported with fewer failed appointments, quicker diagnosis and treatment, and improved teaching and training (2).

In part »Leadership skills« Šimundić AM (4) pointed that besides knowledge, competence and skills in laboratory medicine, specialists in laboratory medicine are nowadays required to have a number of soft skills to help them positively interact with their employees and their team members. Being in a leadership position certainly requires good leadership skills. It is difficult to say which are the most important skills, one leader must have. Being a good leader means to excel in many of them, if not all. The more, the better. For sure, a good leader is able to communicate effectively. Communication means not only to articulate your thoughts clearly, without ambiguity and with utmost clarity, but also to be a good and active listener, who is able to read nonverbal communication and verbal language. A good leader will be the one who will always facilitate group conversations to make them as focused as possible to the meeting outcomes and goals.

In part Project management Lippi G (5) pointed that laboratory diagnostics plays a crucial role in modern medicine, since it provides essential contributions to the clinical decision making, to the managed care, but also for optimizing care pathways, streamlining activities before, during and after analysis, promoting standardization and/or harmonization, and improving appropriateness. Recent changes in the essential nature of clinical laboratories, mostly resulting from technological advancements, shortage of vocations

and cost-containing policies, have however contributed to catalyze a paradigmatic transformation of laboratory professionals. Original and basic tasks, mostly encompassing development or selection of analytical techniques along with organization of workflows within the laboratory, need now to be integrated and combined with a number of new responsibilities.

Beastall HG (6) in lecture »Communication between the clinical laboratory« and its users strongly pointed that communication between the clinical laboratory and its users occurs mainly in the pre-analytical and in the post-analytical phases of operation. These two phases account for up to 90% of all laboratory medicine errors and in most cases the errors can be attributed to a breakdown of communication. Examples of communication errors include:

Pre-analytical phase: wrong test, wrong sample, wrong container, wrong transport, inaccurate patient information; Post analytical phase: results not received, results ignored, results miss-understood, inappropriate patient follow-up.

Optimizing communication between the clinical laboratory and its users should be a central component of all laboratory improvement plans and it is an essential element of quality management and laboratory accreditation.

In the Session »Laboratory standards in Balkan Region« development of laboratory medicine have been described in Slovenia (7), Croatia (8), Serbia (9), Bosnia and Herzegovina (10), Hungary (11), Montenegro (12), Albania (13), Macedonia (14) and Bulgaria (15). This Sessions is very important as it is possible to compare the level of laboratory diagnostics in these countries, and colleagues can exchange the experiences and help each other to improve laboratory service.

In the Session »Laboratory organization and planning« the following topics are discussed:

- Demand management – from innocent bystanders towards hands-on approach (16)
- Can laboratory participate in hospital cost reduction? (17)
- Analytical quality control based on risk management (18)
- From measurement uncertainty to everyday practice in medical laboratory (19)
- Laboratory role in accreditation of health care institutions in Serbia: agency for accreditation of health care institutions of Serbia – survey point of view (20)
- Laboratory role in accreditation of health care institutions in serbia: chief of accredited laboratory – point of view (21).

In the Session »Challenges in laboratory medicine« authors from Turkey (22), Israel (23) Romania (24) and Serbia (25) described that in vitro diagnos-

tics (IVDs) provides objective information supporting »Evidence Based Medicine« constituting a basis for accurate and fast diagnosis which leads to appropriate and more effective therapy, targets drug treatments according to patient's response, causes reduction of morbidity, provides risk prediction and reduction, allows improved compliance, monitors recovery from disease and effects of treatment which allow for reassessment and updating of therapy, shortens length of hospital stay, lowers risk of hospital infection, and improves the quality of life of patients. and how for example laboratory system operate in Israel. Clinical Laboratories in Israel are functioning within various health care systems including in health maintenance organizations (HMO), in hospitals (Publics or belonging to HMOs) and in the private sector (one private hospital and a few private clinics). The private sector is minor in the Israeli healthcare system and most clinical laboratories are under the public system including regulation by the Israeli Ministry of health. In this context, the laboratory division in the ministry of health serves as a professional regulator of clinical laboratories operating in all the various healthcare systems. Regulation include a requirement for the clinical laboratories to operate under a quality assurance system (ISO 9001 or ISO 15186). In addition, all hospitals in Israel are required to comply under the Joint Commission International (JCI) accreditation system (23).

Contrary in Romania training in clinical laboratory is poorly represented in the general medical curriculum, resulting in junior doctors ordering unnecessary/inappropriate tests or requiring tests too frequently, as well as misinterpreting tests results. The aim of this study was to assess the level of self – confidence of medical residents from university hospitals in Cluj Napoca in ordering and interpreting some usual lab tests, and to identify their learning needs in that respect (24).

Author from Serbia (25) pointed that the constant work on improving QMS in health care system is one of the development mechanisms for upgrading and enhancing of health care. Standardization of conditions under the principles of good clinical practice (GCP), monitoring of modern medicine according to evidence based medicine (EBM) and good laboratory practice (GLP) reduces the possibility of action of various factors. Principles of good clinical practice are insured by application of total quality management system (TQM). The quality system is realized in accordance with the principles of focusing on users-doctors and patients, providing quality and timely services, informing and improving, following the progress of clinical-biochemical diagnostics, introducing modern and efficient testing methods, rational laboratory diagnostics, accurate and timely findings. The aim of this lecture is introducing the participants with clinical significance of accreditation and application of good clinical practice as well as

activities on constant improving of health care quality in medical institutions.

Three last Sessions have been devoted to the practical examples in laboratory medicine as:

- Laboratory diagnostics of anticoagulation (26)
- Assessment of the utility of different APTT reagents in testing lupus anticoagulant – real lab scenario (27)
- Assessment of hypercoagulable state in normal pregnancy and preeclampsia using global hemostatic assays (28)
- Clinical chemistry and drug management (29–31) and
- Endocrine disruptors panel (32–35).

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Conclusion

In conclusion it will be very useful if in the next 16th Belgrade Symposium for Balkan Region we discuss about achievements in future development better health laboratory service to our customer patients and health staff.

Conflict of interest statement

The authors stated that they have no conflicts of interest regarding the publication of this article.

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