A Systematic Approach to Evidence Based Laboratory Medicine

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Abstract

The evidence-based laboratory medicine (EBLM) will be one of the most essential fields to provide the backbone for the evidence-based medicine (EBM). The Committee on Systematic Reviewing in Laboratory Medicine (C-SRLM) was established to promote EBLM by the leading members of related fields. It was organized by International Clinical Pathology Center (ICPC) and consists of the following four teams; Methodology Team, Selection Team, Statistics Team and Management Team.

In collaboration with the Evidence Based Diagnosis (EBD) Research Project Team established by Japanese government, C-SRLM has succeeded in its well balanced conduct of the EBM oriented research activities, international and inter-organizational cooperation, accumulating comprehensive database on EBLM and their publication through the internet.

Keywords:
Evidence-Based Laboratory Medicine (EBLM), Evidence Based Diagnosis (EBD), Evidence-Based Medicine (EBM), Cochrane Collaboration, Laboratory Test

Introduction

Recently the evidence-based medicine (EBM) has been drawing much attention in health care system, in which evidence-based diagnosis (EBD) in a timely fashion should be essential. Clinical laboratory data are most objective among various diagnostic information, and they should provide most useful evidence for medical decision making. International Clinical Pathology Center (ICPC) considers the evidence-based laboratory medicine (EBLM) to be one of the most important subjects in the field of laboratory medicine in the coming new century. Therefore it organized the establishment of the Committee on Systematic Reviewing in Laboratory Medicine (C-SRLM), which consists of the leading members of related fields, for the purpose of promoting EBLM.

Practice of the evidence-based laboratory medicine is considered to require a more specialized approach than ordinary one used generally for the evidence-based medicine, because of the following reasons;

(1) Unlike the effectiveness of therapeutic measures which can be evaluated by comparing only two groups of those who are given or not given the tried medicine, there will be almost infinite combinations of various diagnostic tests and various phases of clinical courses.

(2) Unlike the medication, which has direct effects to the patient outcome, many steps should be taken to analyze the effects of executing particular laboratory tests to the final outcome of the patient.

(3) Many factors may cause various statistical biases of the laboratory data.

The purpose of the project presented in this paper is to organize a comprehensive research group of the leading members of all related fields, to establish appropriate guidelines proper to the evidence based laboratory medicine, and to promote it’s continuous application into practice.

Methods

Under the chairmanship of Dr. Kawai, the Director of International Clinical Pathology Center (ICPC), and the vice-chairmanship of Dr. Kanno, the President of Japan Society of Clinical Chemistry (JSCC), the Committee on Systematic Reviewing in Laboratory Medicine (ICPC/C-SRLM) is organized [1]. It is composed of the following four teams.

(1) Methodology Team (Chief: Dr. Kambe, chairman of the
Committee of Laboratory Informatics, the Japan Society of Clinical Pathology; JSCP), which prepares the standard methodology manual for systematic reviewing (meta-analysis) and the requirements for publications which deal with clinical usefulness of diagnostic tests.

(2) Selection Team (Chief: Dr. Watanabe, chairman of the Committee of Utilization of Laboratory Tests, JSCP), which selects the subjects suitable to be studied in this project.

(3) Statistics Team (Chief: Dr. Fukui, Professor of Clinical Epidemiology, Kyoto University), which studies and proposes the most suitable statistical methods to be applied in SRLM.

(4) Management Team, which manages the Committee activity and communicates with national and international organizations. It consists of T. Kawai as Chair-holder, T. Kanno (Vice Chair), M. Kambe (Methodology leader), K. Watanabe (Selection leader), T. Fukui (Statistics leader), K. Kawano (President, Japanese Association of Clinical Laboratory Physicians; JACLaP & Japanese Committee for Clinical Laboratory Standards; JCCLS), K. Nakahara (Department of Laboratory Medicine, Tokyo University) and I. Sakurabayashi (Professor of Jichi Medical School and President, JSPS).

Besides, the Evidence Based Diagnosis (EBD) Research Project Team (Chief: Dr. H. Ishida, http://ebd.umin.ac.jp/), which is organized by the Ministry of Science, Education, Sports and Culture of Japan, provides assistance of highly-advanced technologies to the ICPC/C-SRLM in preparing a mailing list for efficient discussions and a bilingual WWW site to accumulate the database collected through this project and finally to make them easily accessible to the public (Figure 1, http://ebd.umin.ac.jp/srlm/).

Results

The ICPC/C-SRLM was established in April 2000 and the consensus about the collaboration was established with the EBD Research Project Team in May 2000. Under this framework, the First Study Group on SRLM on High Sensitive CRP Measurement dedicated to the multi-centers clinical study on Japanese populations in the cases of neonatal infections and cardiovascular and cerebrovascular diseases has been successfully conducted.

Besides, its collaboration with the Cochrane Methods Group on Screening and Diagnostic Tests and with the Committee of Evidence-based Laboratory Medicine of the International Federation of Clinical Chemistry (IFCC/C-EBLM) is going to be discussed among their leading members and us during the 8th International Cochrane Colloquium held in Cape Town late in October 2000.

Conclusions

An unprecedented non-profitable expert group uniquely specialized to the laboratory medicine for a systematic approach to the evidence based medicine was established and a breakthrough in the laboratory diagnosis and its great contribution to the promotion of EBM will be expected. Everyone interested in participating in our project to accomplish our common goal and to share its fruits are welcome.

Acknowledgments

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References


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Notice

ICPC/C-SRLMの策定について
Establishment of ICPC/C-SRLM

Recently it was noted that the phrase "Evidence-Based Medicine" (EBM) has been drawing much attention in health care system, in which "Evidence-Based Diagnosis (EBD)" in a timely fashion should be essential. Clinical laboratory data are most objective among various diagnostic informations, and should provide most useful evidence. International Clinical Pathology Center (ICPC) consider "Evidence-Based Laboratory Medicine (EBLM)" to be one of the most important subjects in the field of laboratory medicine in the coming new century, and has established the Committee on Systematic Reviewing in Laboratory Medicine (C-SRLM), which consists of the leading members of related fields, for the purpose of promoting EBLM. Its aim, plan and members appear in the following announced document.

Figure 1 The Home Page of the ICPC/C-SRLM.