

Report of the Sysmex Scientific Seminar 2003

the 26th Sysmex Hematology Seminar in Japan

the 1st Sysmex Scientific Seminar in Vietnam

the 2nd Sysmex Scientific Seminar in the Philippines

the 6th Sysmex Scientific Seminar in China

We, Scientific Division hold the Sysmex Scientific Seminar not only in Japan but also in Vietnam, the Philippines and China.

The 26th Sysmex Hematology Seminar in Kobe, Japan, was held in September and the lectures were simultaneously sent by satellite to Tokyo, Nagoya and Fukuoka. As a result over 1,000 people heard useful lectures and information. This year's main theme is "Morphology and various diagnostic techniques in leukemia diagnosis", and four famous speakers gave lectures. There was good discussion on each lecture. A lot of participants attended the lectures and asked many questions.

In October, in Vietnam and the Philippines, we invited a speaker from Germany who lectured on RET-Y in functional iron deficiency. The other lectures were on ISO, hematology, coagulation, urinalysis, HbA1c and IT.

In Vietnam, this was the 1st Sysmex seminar and also the first time a large diagnostic seminar was held in the nation. In the Philippines, the hall was full with about 450 participants.

In November, in Chengdu, China, this was the 6th Seminar and the first time to be held in an inland area. There were a lot of participants. We exhibited many of our new analyzers, and a famous Japanese doctor lectured about ISO15189.

In these scientific seminars, all the speakers gave excellent lectures with relevant and current information. Participants were satisfied with the contents of the seminars.

We thank all participants, speakers and others involved in these scientific seminars.



The Seminar in Vietnam



The Seminar in Philippine



The 26th Sysmex Hematology Seminar

Date: 13th September, 2003

Place: Kobe (Main)
Tokyo, Nagoya, Fukuoka (Satellite)

Lectures:

1. Masao TOMONAGA
- Department of Hematology, Molecular Medicine Unit, Atomic Bomb Disease Institute, Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan.
2. Yohko KAWAI
- Department of Laboratory Medicine, Keio University, School of Medicine, Tokyo, Japan.
3. Kinuko MITANI
- Department of Hematology, Dokkyo University School of Medicine, Tochigi, Japan.
4. Tatsutoshi NAKAHATA
- Department of Pediatrics, Graduate School of Medicine, Kyoto University, Kyoto, Japan.

Chairman:

Kazuhiko NAKAHARA

- Department of Clinical Laboratory Medicine, Tokyo University Graduate School of Medicine, Tokyo, Japan.

Akiko YONEYAMA

- Toranomon Hospital, Tokyo Japan.

Shigeru TAKAMOTO

- Department of Transfusion Medicine, Aichi Medical University School of Medicine, Aichi, Japan.



The 26th Sysmex Hematology Seminar in Kobe, Japan



FAB Classification and WHO Classification: Concomitant Use of Two Classifications for Hematologic Practice

Masao TOMONAGA



Professor, Department of Hematology, Molecular Medicine Unit, Atomic Bomb Disease Institute, Nagasaki University Graduate School of Biomedical Sciences, Sakamoto 1-12-4, Nagasaki, Japan.

The FAB classification proposed in 1976 is basically a morphological classification of leukemia. In contrast, the WHO classification that was newly proposed incorporated the results of chromosome and genetic research developed during the past 25 years after the FAB classification. WHO aims at a genetic classification of tumors of the hematopoietic and lymphoid tissues. However, such a genetic classification seems still premature, only a part of leukemias and lymphomas have known genetic abnormalities that can establish a disease entity. Many cases with hematologic malignancy remain to be studied for their undiscovered gene abnormalities. Therefore it is still necessary to make a diagnosis in more than a half of cases based only on morphology and immunological marker profiles. In this context WHO classification proposed a well organized scheme by retaining that of FAB for managing a mixture of cases with genetically defined entity as well as cases diagnosed based on morphology. If one use this WHO classification by abandoning FAB classification, confusion will be inevitable. Such confusion may be avoided if it is stipulated as a routine to diagnose each case first by FAB typing, then to further classify it with WHO by performing suitable chromosome and / or genetic analysis to choose an appropriate therapy. Recent advance in the treatment for hematologic malignancies such as molecular targeting therapy as represented by imatinib mesylate for Ph-chromosome (BCR/ABL) -positive leukemia undoubtedly force a clinician to employ such genetic diagnosis based on WHO classification. In this lecture it will be emphasized by presenting a scheme that allows concomitant use of two classifications to greatly facilitate daily practice for making diagnosis and choosing therapy. WHO classification appears as an important mile stone towards future accomplishment of total genetic classification for hematologic malignancies.

Usefulness of Flow Cytometric Immunophenotyping -How far does it coincide with morphological diagnosis-

Yohko KAWAI



Assistant Professor and Vice Director of Department of Laboratory Medicine, Keio University, School of Medicine, 35, Shinanomachi, Shinjuku-ku, Tokyo 160-8582, Japan.

Flow cytometric immunophenotyping (FCI) is a powerful means of detecting and characterizing hematological malignancies. Diagnosis based on FCI appreciates cell surface marker analysis by laser flow cytometry, which could determine promptly and precisely the cell assignment of particular lineages and differentiation stages of hematology neoplasms, using monoclonal antibodies in order by cluster of differentiation (CD) numbers. Thanks to the marked progress in the development of devices & systems and fluorescence-labeled antibodies, it is now possible to analyze complicated immunological markers in a short time. The mainstream in this respect is the development of the multicolor analysis method, and an attempt at the 4-color analysis and whole blood method has also been established. The diagnosis based on the multiple analyses, such as intracellular and intranuclear antigen analysis etc., is also very useful. Though various antibody panels and analysis methods have been proposed as useful for FCI diagnosis, a 100% coincidence in the diagnoses is not always observed. How far the hematological malignancies can be diagnosed on the basis of immunophenotyping alone? The lecture discusses this point with reference to the data obtained at the lecturer's institution as well as those obtained at other institutions.



How Effective are the Chromosomal Analysis and Genetic Diagnosis in Diagnosing Leukemia?

Kinuko MITANI

Department of Hematology, Dokkyo University School of Medicine, Kitakobayashi 880, Mibu-Machi Shimotsuga-gun, Tochigi 321-0293, Japan.



The diagnosis of leukemia is mainly based on the FAB classification or WHO classification. In this regard, it has been made clear from various viewpoints that these morphological classifications alone are insufficient for the diagnosis of this disease. Especially for preparing an appropriate therapeutic strategy by stratification based on the prognostic factors, the chromosomal analysis and genetic diagnosis have been shown to be useful diagnostic methods. It has been demonstrated that the abnormalities including t (8 ; 21) , t (15 ; 17) and inv (16) imply favorable prognosis while those of 11q23 translocation, Philadelphia chromosome (t (9 ; 22) translocation), and FLT3 tandem duplication lead to poor prognosis. In addition to the chromosomal analysis, the quantitative genetic diagnosis is especially useful for judging the therapeutic effect. In the treatment of leukemia, it is necessary to select appropriate treatment strategies including chemotherapy and hematopoietic stem cell transplantation by employing the chromosomal analysis and genetic diagnosis in combination with morphological diagnosis.

Future Prospects of Regenerative Medicine

Tatsutoshi NAKAHATA

Professor and Chairman of Department of Pediatrics, Graduate School of Medicine, Kyoto University, 54 Kawahara-cho Shogoin Sakyo-ku Kyoto 606-8507, Japan.



Recently, the basic research of regeneration medicine is extensively conducted and the results are clinically applied one after another. The cell that serves as the foundation of regeneration medicine is the stem cell that is known to have self-renewal ability as well as the function to differentiate into various cells. The regeneration medicine currently performed or to become applicable in the future takes advantage of various somatic stem cells that are present in our body. The stem cells are known to be present in various tissues including hematopoietic stem cells as well as vascular endothelium, skin, intestinal epithelium, genital organs, liver, kidney, nerve tissue, etc. The presence of MAPCs that have the function comparable to that of embryonic stem (ES) cell in the human bone marrow has also been reported. Even though there is an ethical problem, the utilization of ES cell that demonstrates almost infinite self-renewal ability is conceivable in the future. Recently, the regeneration medicine in Japan is showing rapid expansion. However, the people of Japan can appreciate the regeneration medicine better and this type of medicine can be offered in a wholesome manner if the researchers and medical staff should rigorously assess the scientific, ethical and social features as well as the safety and disclosure of the medical care to be conducted while proceeding with the clinical application.

This lecture describes the current status and future tasks of regeneration medicine with focus on the researches conducted by our department.



The 1st Sysmex Scientific Seminar in Vietnam

Date & place : Hanoi / 7th October, 2003

- Speakers:
- 1. Clinical Utility of Some Coagulation tests**
Dr. Cung Thi Ty (Hanoi, Vietnam)
- Bach Mai Hospital
 - 2. Diagnostic Utility of Automation in Haemostasis Investigations**
Dr. Vijay Parekh (Singapore)
- Sysmex Singapore Pte Ltd.
 - 3. D-Dimer & FDP Test Utility in DIC and Fibrinolysis Diagnostic**
Ms. Jeannie Ong-Chan (Singapore)
- Sysmex Singapore Pte Ltd.
 - 4. DIC**
Dr. Nguyen Anh Tri (Hanoi, Vietnam)
- National Institute of Hematology and Blood Transfusion
 - 5. Clinical Utility of the RET-Y in Functional Iron Deficiency**
Dr. L Thomas (Frankfurt, Germany)
- Department of Laboratory Medicine, Hospital North-West, Frankfurt/Main

The 2nd Sysmex Scientific Seminar in the Philippines

Date & place : Manila / 10th October, 2003

- Speakers:
- 1. Current Status of National External Quality Assessment System in Japan**
Dr. Noriyuki Tatsumi (Osaka, Japan)
- International Buddhist University
 - 2. Global Standardization by Clinical Laboratories in 21st Century -ISO15189 and its related issues**
Mr. Keiji Fujimoto (Kobe, Japan)
- Sysmex Corporation
 - 3. Streamlining Laboratory Workflow through Sysmex IT Solution (HCLAB)**
Mr. Tek Ken Chai (Petaling Jaya, Malaysia)
- Sysmex Malaysia
 - 4. Issues in Urine Microscopy & Role of Urine Flow-Cytometry**
Dr. Vijay Parekh (Singapore)
- Sysmex Singapore Pte Ltd.
 - 5. HbA1c Quick Assay with the Automated Glycohemoglobin Analyzer, TOSOH HLC-723G7**
Mr. Yoshiyuki Shindo (Tokyo, Japan)
- TOSOH Corporation
 - 6. Laboratory Diagnosis of von-Willebrand Disease**
Dr. Rodelio Lim (Manila, Philippine)
- University of Saint Thomas
 - 7. Clinical Utility of the RET-Y in Functional Iron Deficiency**
Dr. L Thomas (Frankfurt, Germany)
- Department of Laboratory Medicine, Hospital North-West, Frankfurt/Main



The 6th Sysmex Scientific Seminar in China

Date & place : Chengdu / 1st November, 2003

- Speakers:
- 1. How does the Clinical Laboratory respond to “ REGULATIONS TO DEAL WITH MEDICAL ACCIDENTS ” ?**
Dr. Ziyu Shen (Beijing, China)
- Clinical Inspection Center of Department of Medical Administration
 - 2. Evolution of Setting Up Haemocyte Analysis Tracing System**
Dr. Mingting Peng (Beijing, China)
- Clinical Inspection Center of Department of Medical Administration
 - 3. The Consideration and Prospect of Current Urine Inspection Method and Mode**
Dr. Tang Jiang (Guangzhou, China)
- Affiliated No. 1 Hospital of Sun Yat-sen University of Medical Sciences
 - 4. The Problems and Countermeasures the Medical Lab will Confront during Resisting SARS**
Dr. Yulong Cong (Beijing, China)
- China Inspection Society
 - 5. The Application of Fluorescent Dye in Automatic Hematology Analyzer**
Dr. Fu-sheng Wang (Mundelein, USA)
- Sysmex America Inc.
 - 6. ISO15189 Certification System and Development Trend**
Dr. Kiyooki Watanabe (Tokyo, Japan)
- Keio University, School of Medicine
 - 7. The Importance of HbA1c Determination**
Dr. Jun Uchida (Tokyo, Japan)
- TOSOH Corporation



Lunch in Vietnam



The Seminar in China