

Satellite Meeting of Congress

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HEMORHEOLOGY IN JAPAN: A BRIEF HISTORY \*

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I feel honored in being invited to send a message for publication in the book pertaining to the present status of cardiovascular hemorheology in Japan.

It so happened that I played a role, although a minor one, in the initiation of hemorheological studies in your great country. This minor involvement of mine goes back to September, 1960, when I gave a Special Lecture before the 8th Congress of the International Society on Blood Transfusion to which I was kindly invited by the Organizing Committee of the Congress and by Professor Tomo Ogata, its President. This so-called Special Lecture before the entire Congress was entitled "Hemorheology. An Introduction" and was co-authored by George W. Scott Blair. After the lecture I was happily surprised when Professor Bun'ichi Tamamushi, whom I had met earlier in Europe, and Professor Syoten Oka greeted me and invited me together with two of their associates, who attended the lecture, to a fine restaurant. A few years later when Professor Ogata visited me at my home in New York, he told me that it was Professor Tamamushi who suggested that I be invited to give this lecture. It is known to me that Professor Tamamushi introduced the science of rheology in Japan and, in a way, he can be credited in making hemorheology known to the blood transfusionists from many countries.

I was glad to inform Professors Oka and Tamamushi about the plan I had with George Scott Blair to start the international journal BIORHEOLOGY, which was initiated nearly a year earlier by Mr. Robert Maxwell, the Publisher of Pergamon Press. BIORHEOLOGY began publication in 1962 with Professor Oka as one of its Editors and Professors Tamamushi, Noburo Kamiya and Satimaru Seno as members of the Honorary Advisory Editorial Board.

To my knowledge, no work on hemorheology had been done prior to 1960 in Japan, but excellent work was performed by Professor Kamiya at Osaka University on the rheology of protoplasm. I already referred to Kamiya's work in my lecture on rheological problems in biology at the 1st International Congress on

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Rheology in Holland in 1948. Neither Professors Tamamushi nor Oka were aware of Professor Kamiya's work at that time and it gave me a special satisfaction that I had to come from New York to make this known to them. After the Transfusion Congress, I visited with Professor Kamiya in Osaka and told him about my acquainting Professors Oka and Tamamushi with his biorheological research. I was very pleased when one or two years later I heard that my friends Syoten Oka and Noburo Kamiya met and were engaged in some biorheological inquiries.

It goes without saying that I was particularly eager to have our Japanese colleagues, working in biorheology including hemorheology, as participants of international conferences and congresses which dealt with hemorheology and other fields of biorheology. I also was very glad when Professor Oka could participate in the 1st International Conference of Hemorheology, held in Reykjavik, Iceland in 1966, and that he and our other colleagues and friends from Japan could participate in the 2nd International Congress of Hemorheology at Heidelberg and, of course, in all subsequent congresses of the then larger International Society of Biorheology in the different countries, as well as at other biorheological conferences.

Within a rather brief period of time there has been a growing keen interest in the field of hemorheology among numerous scientists and active research spread widely in Japan's universities and other research institutions and laboratories.

I was glad to initiate a US-Japan Cooperative Seminar which took place from April 28 to May 2, 1975 in Kobe and was entitled "Hemorheology and Thrombosis". This conference of five days was organized by my good friend Shosuke Okamoto as the Japan Coordinator for the Japan Society for the Promotion of Science and by me as the American Coordinator for the National Science Foundation. The conference was highly successful. The proceedings of this US-Japan Cooperative Science Program were published, with Professor Okamoto and me as Editors, in Supplement 2 of THROMBOSIS RESEARCH and also as a book of more than 400 pages. Thirty-one participants were from Japan, eight from USA, one from the Federal Republic of Germany and one from Sweden. The following year, a mini-symposium entitled "Hemorheological Aspects of Thrombosis" took place in Kyoto as part of the 16th International Congress of Hematology, with Professor Oka and me as co-chairmen. In addition, there has been the 5th International Congress on Rheology, held in October 1968 in Kyoto, where papers on hemorheology were also presented.

I am mentioning these conferences in Japan as they were the forerunners to the

4th International Congress of Biorheology and its Satellite Meeting in Osaka.

There is still another important event which occurred in Japan, viz., the founding of the first national society of biorheology. Soon after its initiation in 1977, there have been already as many members as there were of the International Society of Biorheology. The Japan Society of Biorheology became also the example for the founding of several other national societies of biorheology in different countries as well as of conferences on clinical hemorheology, such as the one which took place in Nancy, France two years ago and the 2nd European Conference of Clinical Hemorheology. The latter, under the sponsorship of the Royal Society of Medicine, will begin in London in the end of September of this year, probably with the participation of several clinical hemorheologists from Japan.

What has impressed me in particular, as far as the organization of the 4th International Congress of Biorheology in Tokyo is concerned, is the fact that already six and five years prior to the congress in Tokyo its Organizing Committee met and, I am happy to say, I attended as a guest these meetings in Tokyo during my visits in 1975 and in 1976.

I have high regard and enthusiasm for the activities pertaining to biorheological research in Japan, in particular regarding hemorheology in all its domains, viz., theoretical, experimental and clinical.

I should like to take this opportunity to appeal to my Japanese colleagues in clinical hemorheology to publish their work in CLINICAL HEMORHEOLOGY. Our new journal for rapid publication is meant to aid physicians and surgeons in the practice of medicine.

As the contributions on clinical hemorheology, presented at the International Congress of Biorheology in Tokyo and at this conference in Osaka, will be published in CLINICAL HEMORHEOLOGY, a great deal of recent research, including that done in Japan, will become known to a wide public among physicians and surgeons, as well as to the research community in clinical science.

I am ending this message in wishing my colleagues, working in Japan and elsewhere, continued fruitful research in clinical hemorheology. I am convinced, that these good wishes are shared by each participant of the International Symposium on Hemorheological Approach to Cardiovascular Diseases, held at the National Cardiovascular Center on August 3, 1981 in Osaka.