

# NEW ROLES FOR THE NEWLY EXPANDED ORAL AND MAXILLOFACIAL RADIOLOGY IN ASIA

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## PROLOGUE

Professor Takehito Sasaki, the Chairman and members of the Organizing Committee of this memorable First Asian Congress of Oral and Maxillofacial Radiology, all my colleagues and ladies and gentleman!

I am deeply privileged and thank you from the bottom of my heart for giving me the opportunity to deliver this special lecture at this historic, regional meeting of Asian nations. This occasion represents our new resolve of the regional solidarity in our scientific efforts as we are about to usher in the next century.

## THE BEGINNING

In the beginning there was a "creator to 'every being". So it was with this Congress. Professor Yoshishige Fujiki has conceived, along with other leaders from Japan and Korea, the need for regional promotion of orofacial radiology and has served as the creator and midwife of scholarly integration between the two countries, the Japan-Korea Joint Seminar series. Therefore, we the members of this Congress owe much to Professor Fujiki's untiring efforts from its conception to this date. I feel that it is appropriate at this timeto express my personal admiration to the leadership, foresight and endless energy Dr. Fujiki demonstrated during the past 12 years. Accordingly, I would like single him out and take my hat off to Professor Yoshishige Fujiki.

## HOW WE METAMORPHOSED

At this risk of being somewhat monotonous, I consider it my responsibility as the special lecturer to this Congress, to recount briefly the historic events that have resulted in the current situation of our scientific efforts in which we share our pride of accomplishments.

During the period from 1983 and on when the initial idea was entertained for a Japan-Korea seminar series, there were a number of preliminary meetings that were aimed at breakingthe ice for mutual exchange of scientific knowledge on a broad-basis, as well as promotion of common understanding and enhancing of friendship among colleagues who were involved in creating the organization.

These efforts resulted in the First Japan-Korea Joint Seminar of DentomaxillofacialRadiology (DMFR) in August of 1984 at Gifu Dental College under the leadership of Professor Fujiki. The central theme of the first joint seminar in DMFR was placed on "Diagnosis of the Jaw Cysts." Thus, our historic journey has begun.

Prior to this Joint DMFR meeting, Asian nations were already having broad-based meetings such as Asian-Pacific Dental Congress (APDC). However, it is noteworthy that Japan-Korea DMFR seminars were the first international meetings among speciality fields in dentistry. This observation gives another uniqueness in the history of dental science in Asia; i.e., our joint DMFR has served as the forerunner to recognize and implement the need for international cooperation within the context of subspecialties of a professional scientific field.

The Gifu Seminar was also unique in that the organizing group was able to take the maximum advantage of experience gained from the 1974 Kyoto meetings of the Third Congress of IADMFR held a decade prior to our first seminar.

Notwithstanding the positive environment, I believe that the congenial, candid and friendlyexchange of scientific information that took place in the beautiful garden city of Gifu would not have been possible, had it not been a most meticulous and careful preparation that my Japanese colleagues exercised in their planning process. For this, I am still very grateful and am certain that participants of the First Joint DMFR would remember the pleasure and scientific benefits derived from that occasion for a long time to come. Personally, I believe that these experience will remain a beautiful memory for the rest of my life.

In any regional meetings, the adoption of the official language for the particular group presents possible problems. For a variety of reasons, some of which are obvious, we adopted English as our official language. Since every language has idiosyncratic expressions and limits of the particular countries which the language represents. Though English is not a mother tongue to all participants, it was chosen as our official language because of the fact that most other international conferences use English.

It is, therefore, quite natural that we experienced much difficulty in communicating delicate scientific information and our personal feelings during the first DMFR seminar. It was especially difficult to carry out question and answer sessions because of the lack of experiences in the use of English at previous regional meetings. As a result, we had to improvise translating each other's languages; i.e., Japanese into Korean and then Korean into Japanese by those of us who understood the two languages. This took much more time than what was allotted for questions and answers. However, it was a heart-warming as most of us remained without minding the over-run of time and listening to each other until questions were fully resolved.

At this point, I have to congratulate my younger colleagues who foresaw the need to improve communicative skill through refinement of our use of English. Subsequent meetings have amply proved the rewards of their efforts without which the notable improvements in the quality of our subsequent programs would not have taken place.

In May of the following year, 1985, the late Professor Hyung Kyu Ahn led the Second Korea-Japan Seminar Organization around the subject of "Odontogenic Tumors of Epithelial Origins." The venue was the Olympia Hotel in Seoul, and the content of the seminar was impressive. I still remember joyful colleagues engaging in the most serious academic discussions. Some members exchanged

hugging each other, an observation of body language which is rare among Asians, therefore remains in my memory as if I had seen a drawing of the most happy moments of sharing among siblings in an informal, family setting.

Third Joint Seminar of Dentomaxillofacial Radiology (DMFR) was guided by the capable leadership of Professor Keiichi Furumoto in the month of July, 1986, at Tokyo Shigaku Gaikan, with the theme "Odontogenic Tumors-Mesodermal and Mixed Tissue Tumors of Odontogenic Origin."

#### THE SIGNIFICANCE OF THE THIRD DMFR

By this time, as all of you would suspect, the quality of our seminar process had advanced markedly and our friendship grew along with our science. The icing on this wonderful seminar was the fact that the late Dr. Morris, who was the President of the Eighth IADMFR, participated in our seminar with highly encouraging words for our scientific programs.

He made a special pitch to induce our DMFR members to attend the Eighth San Antonio Congress of IADMFR to be held in June, 1988. Seeing slides of the beautiful Texas city and enjoying his invitational efforts were our last encounter with Dr. Morris as he passed away after the solid meeting of the Eighth IADMFR. I am saddened, as I recall his enthusiasm over the future of regional DMFR developments.

The following year, I had the privilege of organizing the Fourth binational DMFR seminar. We dealt with the subject area of "Inflammation of the Jaw and Periapical Lesions". This was held in the Olympia Hotel in Seoul in the month of May, 1987.

As May weather in Seoul is generally pleasant, many friends recommended having a "Bulgogi" garden party. The goddess of weather, however, was slightly mischievous on that particular day. We were met with a sudden shower which forced us to take shelter in a make-shift tent.

We were not discouraged, however, I still remember the relaxed singing and loud talking we indulged in, as we attempted to entertain ourselves, while the fatigue of the rigorous daytime efforts in science withered away. Though the uninvited shower was somewhat embarrassing to me, I also felt that this impromptu experience was a God-given one.

#### THE IMPACT OF SAN ANTONIO CONGRESS (8TH IADMFR)

Due to the San Antonio Congress of IADMFR (8th) our regional Fifth DMFR had to be postponed until July of 1989, when Professor Hajime Fuchihata ably organized the seminar held at Osaka International House. Our central issue was "Malignant Tumors in the Maxillofacial Region". By this time the Japan-Korea Joint Seminar attracted enough international attention, partly due to the ripple-spreading impact of the San Antonio Congress of IADMFR and partly due to the growth of our own scientific reputation of the Joint Seminar Series in global communities of oral and maxillofacial radiologists.

From far-away Hungary came professor Pataky (the President of the Ninth IADMFR), along with Dr. Pazekas, and gave words of encouragement and extended a most cordial and persuasive invitation to the Budapest Congress of IADMFR to all members of our DMFR group.

At the same time came Dr. Ma. Xu-chen from China and received special welcome from all of us,

as this particular Joint Seminar appeared to symbolize a gradual but certain sign of international expansion beyond the two nations which initiated the series. Dr. Ma's presence was especially important to all of us because it was during the time when scholars from China had a great deal of difficulty attending overseas meetings.

"Systemic Disease and TMJ Disorder" was the focal point of our scientific sessions at the Sixth Joint seminar of DMFR which Dr. Tae Won Park hosted at the Swiss Grand Hotel in Seoul during April of 1990. As usual, the meeting was very successful and, once again, a number of individuals expressed opinions regarding the desirability of expanding the Japan-Korea Seminar in a way that would include all Asian countries.

## THE BUDAPEST CONGRESS (9TH IADMFR) AND CLOSING GAP

As pointed out earlier, Budapest, Hungary was the chosen site for the Ninth Congress of IADMFR in 1991. In order to avoid congested scheduling our regional joint seminar skipped a year. Professor Sang Rae Lee organized, in April of 1992, the Seventh Joint Seminar of DMFR which was held at the New World Hotel of Seoul and dealt with the topic, "Wound Healing and Remodeling of Bone".

The reason for having the two consecutive meetings; i. e., Sixth and Seventh, in Korea was due to the fact that the Tenth Congress of IADMFR was also scheduled to take place in Seoul, Korea. To better facilitate the IADMFR organization, our Japanese colleagues willingly accepted to sponsor the Eighth Joint Seminar of DMFR in Japan where the sessions were held in June of 1993 in the beautiful city of Kagoshima.

With the view of smoking Volcano as the back drop of the venue, Professor Takenori Noikura put together an impressive program centering around "Diagnosis In and Around Maxillary Sinus."

The question of developing an expanded organization to include other Asian nations in our regional programs received increasing attention between 1990 (Sixth DMFR) and 1992 (Seventh DMFR). In fact, by the Seventh Seminar of DMFR, Planning Committee for Asian Congress of Dento-Maxillo-Facial Radiology (ACDMFR) was formed and a decision was made to conclude the binational DMFR series at the end of the Kagoshima meeting of 1993.

## THE BIRTH OF ACOMFR

These changes laid the ground for The First Asian Congress of Oral and Maxillofacial Radiology (ACOMFR) which we are enjoying presently. As I feel particularly honored, I would like to take this opportunity to remind all of us that the fine organizational proceedings which brought us together here owe much to the 12 year history and the eight meetings that have taken place between Japan, the host country of this memorable first meeting, and Korea as well as notable support from China and other countries of Asia.

I believe that the natural extension of our communal scientific desire had contributed to developing harmony between IADMFR and ACOMFR both in timing and program development. Accordingly, I will now recount our organizational interaction with the development IADMFR's triannual Congress. It is my hope that these descriptions of historic tidbits would allow us to even more broaden our vision of DMFR as we move into the 21st century. Moreover, I am confident that the global development of our field will continue to grow faster than any other dental speciality group, as has already been shown by our past record.

With his typical low-keyed and yet persuasive manner, Professor Pataky created a smashing success out of the Ninth IADMFR during the month of June, 1991, in Budapest, Hungary. We might note that the Ninth IADMFR took place during one of the most challenging years after the cessation of the cold war.

## **SEOUL CONGRESS OF IADMFR (1994) : A DREAM REALIZED**

The 10th IADMFR in Seoul, after collaboration among colleagues who have helped created this memorable First ACOMFR, was also a reasonable success, although there were challenges surrounding some of the constitutional issues, journal publication and so on.

The venue was the brand new conference center at the Intercontinental Hotel on the south side of Seoul. I was worried about a few possible disruptions, the first of which was that the 10th

IADMFR was to open on June 25th of 1994 which coincided exactly with the 44th anniversary of the start of the Korean Conflict.

Secondly, it was a time period when Korea catches the tail-end of monsoon rain.

Indeed, we had our share of rain which restricted the scheduled post-convention tour programs. To make things worse, all public transportation workers were to go on strike during the convention period. Both worrisome events with the bonus transportation strike did happen and a number of us found ourselves in different compromising situations which most of you can well imagine.

Nevertheless, the week-long Congress generated 171 papers from 23 nations which were represented by 406 registrations. I am particularly appreciative of the patience and understanding of all members, particularly these who had to go through so many council sessions during the early morning breakfast and luncheon periods. I also would like to commend all of you who brought the publication materials with you which expedited the Proceedings Publication which was generously supported by KOSEF (Korea Science and Engineering Foundation) to be published without delay. Since this was only the second time the Convention Proceeding were published, I would like to congratulate ourselves by noting that the Proceedings editions were published both by the original member nations of DMFR; namely, Japan and Korea.

## **OTHER HISTORIC SIGNIFICANCE OF THE 10TH IADMFR CONGRESS**

Following the third Congress held in Kyoto, Japan, in 1974, the Seoul Congress in 1994 represented only the second IADMFR hosted by an Asian nation in its 20 year history with 10 Congresses. That the 12th IADMFR is scheduled in Osaka in 1999 can now be taken as suggestive of the high quality and rapidity of science of dento-maxillo-facial radiology in Asia. We can now take pride in these developing markers of history. We ought to create even stronger impact on the future of the field on global basis by this First ACOMFR in Japan.

## **BEGINNING OF ACOMFR'S REGIONAL CONTRIBUTIONS**

The decision to embark the ACOMFR after the Eighth Binational Joint Seminar between Japan and Korea indeed represents another major landmark which demonstrates: 1) Our sensitivity to the Asian pulse for regional meetings expressed since the Sixth Joint Seminar, and 2) our ability to develop a major consensus on the future of regional development issues without delay.

To me the new name given to this conference suggests another special historic significance on a personal level as it demonstrates the amicable and sharing of our passion in the pursuit of truth in science. The real meaning of The First Asian Congress of Oral and Maxillo-Facial Radiology (The 1st ACOMFR) will thus continue to build upon the past record established by eight previous joint meetings

between Korea and Japan, and at the same time continue to strengthen our global leadership of Asian nations represented here.

Indeed, The 1st ACOMFR is standing at the threshold of a new era. With these historic markers behind us, I am certain that we will embrace the new century with a renewed rigor in our future scientific efforts with a greater sense of solidarity among ACOMFR members.

Now I would like to take my attention to the century-long history of radiologic development and speak a little bit about our future hopes.

### **RADIOLOGY OF THE PAST : SERENDIPITY?**

When one reflects upon the beginning of radiologic fields, I believe we have to note the discovery of X-ray only a little more than a century ago by Wilhelm Conrad Roentgen in November, 1895. Despite a rather serendipitous situation in which Roentgen made his historic discovery and in fact did not know the biologic effects of X-irradiation nor the physical nature of X-ray, the application of X-ray grew out as if it was a global brush fire throughout the medicodental communities.

As with other fields in health science, the field of dentistry requires both artistic elements of human sensitivity and understanding of the rigorous biologic science which sometimes overwhelms us. Hence, it is natural that the beginning of dentistry as a speciality of medical sciences goes back to the earliest days of medical history. An examination of historic contribution of dentistry and other interested sub-fields of biomedical sciences to the future of human health is of importance. This was recognized as early as in the time of Hypocrates. For example, the entire field of anesthesia owe much to dentistry for its present status, and so do other fields of non-tradition at medicine. Another example of this last point in the past several years can be found in the development of Non-Traditional Medicine Programs by U. S. N. I. H., which is particularly interested in pain control and geriatric applications. Radiologic history is no exception to the above.

### **RADIOLOGIC DEVELOPMENTS PIONEERED BY DENTISTRY**

Within three months of Roentgen's discovery in January of 1896, dental application of this mystery radiation (X-ray) began to surface with the first dental radiograph processed by Otto Walkhoph of Universitaet Muenchen with the use of dry human skulls. In the same year, the New York Dental Society hosted a special meeting where William James Morton presented the early model of "X-ray machines" and how to take "X-ray pictures" of teeth in patients. Naturally, Dr. Morton's demonstration given in April, 1896, was the first such demonstration and he was a dentist. As such his presentation included how the filling materials and gold crown could be examined by radiologic means.

Three months thereafter another dentist, Dr. C. Edmund Kells, presented at the Annual Meetings of Southern Dental Association held in July at Asheville evidence for the beneficial effect of X-ray in dental diagnostics, including case reports dealing with intradental images of X-ray.

## RADIATION BIOLOGY AND THE BIRTH OF THERAPEUTIC RADIOLOGY

These pioneering approaches were made within a year after Roentgen's discovery and stands on this Centennial Year of Dental Application, coinciding with the First Congress of ACOMFR. The natural extension of the above mentioned pioneering activities by dental professionals was the proliferation of X-ray usage aimed at diagnostic applications in oral and maxillofacial regions. On the other hand, subsequent improvements in the physics of "Roentgenology" have allowed us to develop a much better understanding of X-irradiation in the context of radiation biology.

## APPLICATION OF RADIATION IN HEAD AND NECK ONCOLOGY

The use of radiation energy in therapeutic fields has shown its remarkable benefit in the treatment of cancers, particularly in the head and neck areas where surgical oncology has clear limitations.

While the progress in radiation biology has excited all fields of health science professions, particularly since the end of World War II, modern dentistry has stepped ahead in the use of radioisotopes in studies of hard tissue development and metabolism, ultrasonic usage in instrument maintenance and related application, computer tomography, magnetic resonance imaging for structural studies of deep-seated lesions along with more recent developments in functional studies by use of positron-emission apparatuses.

These developments have opened a whole new set of subspecialties in radiation research and application, making radiology an essential tool for wide ranging applications where radiation physicists, radiation biologist and a host of paradiologic professionals are working together with us. The progress in these areas has exceeded our wildest imagination we used to have in the "dental X-ray department" of the beginning.

In fact, the application of digital imaging promises us a future in which global networking of radiographic information can be done within a matter of seconds without the physical transfer of the bulky film storage systems of yesteryears.

## EPILOGUE: WE MUST EXPAND WHAT HAS BEGUN

The credit for these remarkable developments can not be ascribed to only one individual or an individual group, as the current status of affairs represents the scientific and technologic efforts from so many relevant disciplines. In this context it is my pleasure to single out Prof. Fuchihata's department at Osaka University Faculty of Dentistry which is moving ahead in pioneering the advanced therapeutic radiology in head and neck malignancies. By taking advantage of inherently ingenious approaches which the art of dental science presumes, his harvest in the area of maxillofacial treatment regimen continues to include new sophistications which leads to more effective cancer treatments and safer application of radiotherapy. The future of remote controlled after-loading technology stands as a living contrast between what is being done and "barehanded" use of Cesium only a decade or so ago.

To stand in front of my beloved colleagues and friends, on this momentous occasion which places another landmark in the progress of our profession, and to deliver this brief message to you has been a personal honor that I will endear for a long time to come.

With the vast populations in Asia who are yet to receive the benefit of our efforts, it is clear that future challenges presented to The First ACOMFR are likely to be greater than our pride-laden history.

Nonetheless, the promotion of human health and welfare in this growing "Village Earth" demands nothing less than an all out efforts by the participants of this particular Congress. As I trust the successful conclusion of this First Congress, I would like to take this opportunity to remind ourselves of the necessity to prepare for future demands which may be far greater than our past journey has presented to us.

Thanking you again, I express my heart-felt congratulations to all of you and the Organizing Committee Members who are singularly responsible for this wonderful new start.

Finally, I would like to express my gratitude to Professor Yoshishige Fujiki who is the person much more qualified to deliver this account of history.

For his generosity, I thank Professor Fujiki for yielding this historic opportunity to me. I will only pledge that I will do my best to continue to collaborate in the future as I have endeavoured in the past.

Thank you very much.