The 5th
AOCR CongressNews
THE OFFICIAL NEWSPAPER OF THE 5TH ASIAN-OCEANIAN CONGRESS OF RADIOLOGY

September 25, 1987 (No. 3) Seoul, Korea

India Plays Host to the 6th AOCR in 1991

— New Presidential Chain and AOSR Flag are to be donated by Korea —

Thursday's Executive Business Meeting

Indian delegate toast

The 6th Asian-Oceanian Congress of Radiology is to be held in New Delhi, India, in 1991. On Thursday's Executive Council meeting of the Asian-Oceanian Society of Radiology, India won the majority out of the 29 votes. There were four candidates of India, Indonesia, Malaysia, and the Republic of China. In the first vote, both India and the Republic of China made a tie. In the second vote, India won the majority vote and selected as the host for the next Asian-Oceanian Congress of Radiology. "India is really a true representative of the Asian-Oceanian Congress of Radiology in the Middle East and the Southeast Asian region," says Dr. K.R. Chaudhari, president of the Indian Radiological and Imaging Association.

He also said that his country will try to attract as many radiologists as possible from each member country to the Congress by convincing them for their active participation. "We have about 2,500 member radiologists in our association," notes Dr. Sudarshan K. Aggarwal, general secretary of Indian Radiological and Imaging Association. Dr. Aggarwal added that India has a wide variety of medical education programs and that radiological research activities done in that country are basically focused on tackling problems faced by India.

"Our national congress of radiology is as big as this AOCR Congress in Seoul, so might handle the preparations without any problem," stresses Dr. Aggawal.

Dr. Sudarshan K. Aggrawal

Dr. William S.C. Hare was reelcted as secretary and treasurer of the Asian-Oceanian Society of Radiology, while Dr. Man Chung Han, secretary general of the 5th AOCR, was named as assistant secretary and treasurer of the AOSR for the next four years. Dr.Man Chung Han proposed donation of new presidential chain and new AOSR flag by Korea and the Council has accepted the offer. The old chain was donated by the Philippines in the second Asian-Oceanian Congress of Radiology, and the chain will be kept at the AOSR office.

In the Council meeting, Dr. Kunthon Sundaravej of Thailand proposed establishment of the Committee on Biological Affects. The proposal was approved by the Council and Dr. Kunthon was appointed as a chairman.

Closing Ceremony

The closing ceremony will be held at the Ball Room at 12:30 p.m. today. All the participants to the 5th AOCR are invited to attend the ceremony. The Congress activity report will be made by the secretary general.

Official Congress Tour to the Korean Folk Village

On Wednesday afternoon, radiologist from around the world enjoyed a trip to the Korean Folk Village, which is some 40 kilomters south of Seoul. The buses departed from the Hilton Hotel at l:30 p.m. and more than 600 radiologists and their accompanies joined the official Congress Tour.

It was fine fall weather and the radiologists enjoyed seeing Korean farm houses and industrial facilities through the window on their way to the Korean Folk Village. Upon arrival at the destination, they were entertained with splendid Korean music and dance performed for the tourists.

Says Dr. H. Takashima: "This is a wonderful tour and is a good chance to see Korea's traditional way of life. Particularly, such Korean foods as biddaeduk and maggoli are tasty." Dr. Woo Sok Choi, professor of Kyunghee University, said that it is very good experience for him to communicate with the foreign radiologists. "We are lacking in facilities, but our academic enthusiasm is very high," says the Korean radiologist. He added that the Congress Tour to the Korean Folk Village will give them a strong impression of Korea.

The Korean Folk Village preserves a model of traditional Korean houses and shops that are actually inhabited by families who live like to ancestors and observe ancient customs and rites. The foreign visitors were able to feel the atmosphere of the Chosun Dynasty.

The life style in the dynasty both of the common people and of the nobility is depicted with their houses arranged according to the province. The houses for the common people are straw-thatched, while those for the nobility are tileroofed.

The village itself is a museum. A wide variety of folk items gathered from all over the country are exhibitged at the specially built model houses. Potters, millers, weavers, blacksmiths, and other craftsmen work just as their ancestors did. In addition, there are two amusement parks, Seoul Grand Park and Yong-In Family Land, are nearby.

Farm Dance

The Role of Ulfrasound in Oncology

The following paper 'therole of ultrasound in oncology' was presented by Dr. David Cosgrove, Royal Marsden Hospital, London.

Staging

The main roles of ultrasound in staging are the detection of lymphadenopathy and of liver metastases. Enlarged nodes in the upper para-aortic chain are readily demonstrated but, as with CT, normal nodes are not usually visualised and reactive enlargement cannot be distinguished from metastatic. Liver metastases are reliably detected provided they are larger than about 1cm in diameter and ultrasound forms the first test for the liver in most staging protocols. Small lesions and technical difficulties account for a false negative rate of some 10% while benign lesions, such as haemangiomas and granulomatous masses cannot be differentiated and so require further investigation.

Local extension of tumours may be difficult to demonstrate with ultrasound. Invasion by carcinoma of the cervix and kidney, for example, are better detected on CT. On the other hand, invasion of the renal veins and the cava is better demonstrated by ultrasound.

Follow-up

Imaging to monitor the progress of impalpable masses is important in tumour management. Ultrasound or CT may be used for this, the choice depending on the relative ease of visualisation. Thus for the renal bed, the liver and in the pelvis, both techniques will give good results, while for the retroperitoneum CT is superior. In the routine re-staging of tumours where the tempo of the disease is slow, ultrasound is more cost-effective: an example is serial scanning of the liver in carcinoma of the breast and of the pelvis in carcinoma of the ovary. Ultrasound is also valuable in monitoring high risk sites such as the opposite kidney in patients with Wilm's or the testis in leukaemia.

Special Techniques

The flexibility and immediacy of ultrasound makes it ideal for controlling needle aspirations. Fine needle aspiration biopsy is a valuable and safe technique for characterising mass lesions and ultrasound is preferred for monitoring whenever the mass can be visualised. Ultrasound is also useful for aspirating fluid collections, e.g. presumed cysts in the breast and kidney and for serosal collections, e.g. diagnostic taps of ascites. It is invaluable for planning drainage of pleural effusions and of ascites, reducing or eliminating dry taps and complications. Usually, in these cases, it is sufficient to plan the procedure with ultrasound, marking the optimum skin site for subsequent puncture. For pericardial effusions it is safer to monitor the procedure continuously, thus controlling the needle or cannula site and ensuring complete emptying. A similar approach can be adopted for post-operative fluid collections such as after splenectomy. A diagnostic tap may be obtained or a drain inserted under ultrasound control for definitive management.

The 2.0 Tesla magnetic resonance imaging (MRI) was established at the Seoul National University Hospital. And about 60 radiologists who participated at the Congress visited the hospital on Wednesday morning to see the image produce by the new machine. The foreign radiologists commented that the quality of the first MR image is very good. And the imaging system was commercialized by Goldstar Company.

Excellent Preparations of the Organizing Committee

Dr. Joseph K.T. Lee, radiology professor of Washington University, delivers a special lecture 'Recent Advances of MRI Diagnosis' today to close the five-day-long Congress. In an interview with the CongressNews, Dr. Lee said that preparations of the Organizing Committee were excellent. He was impressed by the quality of papers presented during the conference. "The Congress was very nice and the quality of discussions was high," says the prominent radiologist.

Dr. Lee is one of the two guests invited to deliver a special lecture. In particular, he showed keen interest in MRI diagnosis. Dr. Lee also enjoys eating Korean food such as bulgogi and Kimchi.

Korea's Radiological Technology is Admirable

"I stayed only for a few days now in Korea," says Dr. Ismail Saad, professor of the National University of Malaysia, "I trust that the level of technologies in Korea is admirable and the arrangement for the Congress is quite successful."

He attended several paper discussions beginning with Radiology in the Year 2,000. The most interesting topic of this Congress was the magnetic resonance imaging, he said and added that radiology has become one of the most meaningful tools for medicine both in diagnosis and therapy.

Dr. Ismail said that there are four main topics of the Congress and they are medical papers, scientific exhibition, commercial exhibition and business of AOSR.

"What I have seen in Korea is in excellent level and impressed by the questions which are being raised during various sessions," says the radiologist, adding that most of the progress which have been made in imaging have been obtained by the use of computer. He also noted that if the computer technology continues to develop, this will have a great impact on imaging.

Dr. Ismail Saad

Open Quiz

Answer to Wednesday's Case: Rhabdomyosarcoma
Winner: Maki Alhilli and 18 others
Answer to Thursday's Case: Multiple Myeloma
Winner: Malai Muttarak and 100 others

Paper

Ultrasound is Cost Effective

Ultrasound is a cost effective, tomographic imaging method that provides detailed information on soft tissues. It is primarily an anatomic technique, but the addition of Doppler allows blood flow to be evaluated. It suffers from important limitations that restrict its areas of application, the major being the fact that bone and gas are impenetratable; this means that the brain, most of the chest and a variable portion of the abdomen are generally inaccessible. In addition, bone itself cannot be imaged so that assessment of malignant involvement of the skeleton is impossible with ultrasound. The other limitations are less severe, but sometimes pose problems: the quality of ultrasound images varies from patient to patient depending on body build and the degree of gassy distension of bowel. Ultrasound is operator dependent and the image presentation is difficult for the oncologist to understand, both points of weakness when compared to CT. On the other hand, oltrasound is a flexible technique that is well tolerated by patients and the mobility of the scanners means they can be taken to intensive care and mobility of the scanners means they can be taken to intensive care and isolation units and to the operating theatre for critical patients.

The uses of ultrasound in oncology fall into four main categories: screening, diagnosis of the primary tumour and presentation, staging and treatment follow-up. Some comments ofn special applications are added.

Screening

Its non-invasive nature is self-recommending for ultrasound in screening applications, but the serious implications of failure to detect abnormalities poses important limitations. For example, the early hopes that ultrasound might replace X-ray mammography for breast screening have been abandoned because ultrasound proved to be insensitive. Screening for carcinoma of the prostate using endoprobe scanners and for hepatomas have been useful; screening for carcinoma of the ovary has been of intermediate value.

Primary Diagnosis

Ultrasound has found application in tumour diagnosis in the neck (parotid, thyroid) and peripheries (soft tissue sarcomas), but the major application is the abdomen. Here, renal, hepatic and pancreatic tumours have been most rewarding. The reliability with which ultrasound can detect cysts makes it pivotal in the investigation of renal masses. Simple cysts can be distinguished from solid lesions (which are almost always tumours) with near total reliability, and, in children, hereditary and congential cystic diseases, as well as hydronephrosis, are usually easy to distinguish from nephroblastoma or neuroblastoma. In the pancreas the situation is a little more complex: although the demonstraction of the pancreatic mass is highly reliable (a negative study carrying a lower confidence rating), the discrimination between inflammatory and malignant masses is impossible unless gross features, such as metastases, are present. Therefore, fine needle aspiration biopsy is a mandatory next step. A similar situation applies for ovarian masses: the ultrasound criteria of begin lesions are insufficiently reliable to allow expectant management; here percutaneous biopsy is usually contra-indicated because of the risk of peritoneal dissemination and laparotomy is required. In the liver, ultrasound is useful in the detection of hepatoma, even when arising in a cirrhotic background. Small confiend lesions can be detected at a stage when excision is still possible. This sensitivity has been exploited in mass screening of high risk populations.

Correction

On page 5 of the AOCR Congress News, the Bangladesh who is now trained in Korea is a radiologist, not a technician.

CONGRESS SCHEDULE

Sept. 25 (Fri)

8:30-9:20AM	9:40-11:10AM	11:30-12:15PM
Plenary Session	Symposium	Special Lecture
IV. Abdominal Radiology		II. Recent Advances of MARI Diagnosis
	XIX. Interventional Radiology III-Hepatic Neoplasm II	
	XX. Pediatric Radiology	
	XXI. Neuroradiology III-Spine	
	XXII. Panel Discussion-Medical Education in Radiology	
	XXIII. Radiotherapy IV-Recent Trends in Radiation Oncology II	
12:30 PM Closing Ceremony		

The 17th International Congress of Radiology in Paris

The next International Congress of Radiology (ICR) is to be held in Paris for 8 days from July 1, 1989. "This is the first time that such an important Congress will return to France since 1931, "says Maurice Tubiana, chairman of the 17th ICR Oreganizing Committee. "French and European radiological communities want to make it a great medical, scientific and social event."

Dr. Tubiana, in his welcoming message, noted that radiodiagnosis and radiation oncology are currently undergoing considerable changes because of the rapid growth in knowledge and techniques. "The introduction of computers has brought progress with new imaging techniques and renewed conventional ones," pointed out Dr. Tubiana. "Imaging during the 1990's will be different from that of the 1980's and the Congress's timing comes just at the right moment for studying the prospects."

In this connection, the organizers of the 17th ICR aim at making it a forum where, at the highest technical, scientific and medical level, there may be an exchange of ideas and a common study of radiology's future, according to the French radiologist. The deadline for registration and for submitting summary of papers is set on December 31, 1988. ■

Remarkable Progress seen in Korea's Radiological Technology

"Since the practice of radiology is quite expensive, it might be the main reason why only limited number of people are benefitted from the radiology technology," indicates Dr. Masahiro Iio, professor and chairman, department of radiology at the University of Tokyo, "The progress of science is going on in a remarkable speed, but, unfortunately, this does not accompany the progress of economies."

In his paper presented on Wednesday, Dr. Iio said that enen though MRI of proton is still showing a remarkable progress to the directions of fast imaging and three dimensional imaging, new wave of MRI can be predicted in the area of other nuclides imagings.

The Japanese radiologist commented that the 5th AOCR is the largest radiology congress ever held in Asia, adding that he is satisfied with the conference. He said that Korea has achieved a remarkable progress in radiology in the last 20 years.

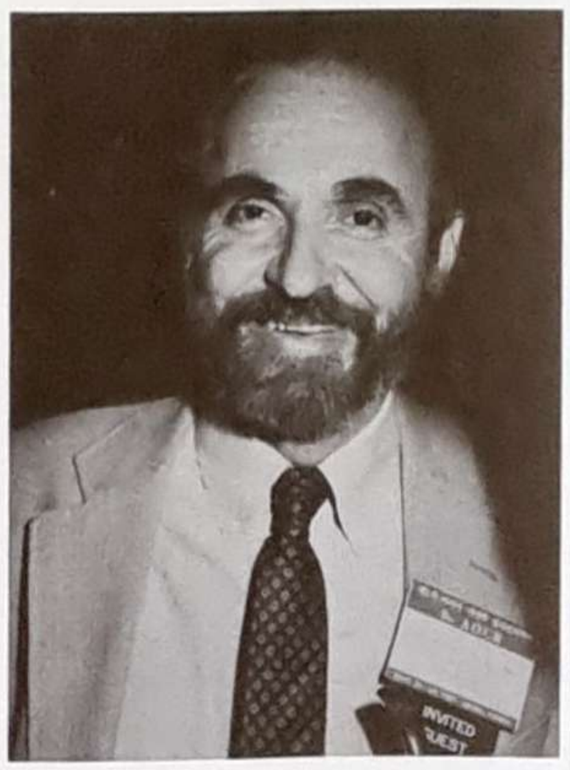
For Dr. Iio, this is his fifth visit to Korea and he already visited such cities in the south of the country as Kyungjoo and Ulsan, a huge industrial complex. This time, he wish to enjoy sightseeing here in addition to attending the radiology congress. In particular, Dr. Iio intends to visit many places in Seoul. Bulgogi, galbi, and Kimchi are among his favorite Korean foods. "Kimchi is delicious and I like it very much," says the Japanese scholar. ■

Price Cutting Required for Wider Use of MRI

"The current development of radiological technology is overwhelming," says Donald Resnick, professor of radiology, University of California in San Diege, "but radiologists are now anxiously seeking new avenues to further develop the technology." He has been worked as a radiologist in the last 15 years, specializing in bone radiology.

Indicating the high price of imaging machines, Dr. Resnick said that their price has to be lowered that hospitals and institutes can easily purchase the equipment. He commented that the nuclear magnetic resonance developed by Dr. Zhang Hee Cho of the Korea Advanced Institute of Science and Technology has a good image and that he was quite impressed by that.

Dr. Resnick came to Korea from a meeting in France and stayed in Korea for only three days. On the first day of the Congress, he presented a paper themed 'Advanced imaging of the musculoskeletal system.'



Dr. Donald Resnick

Labeled Monoclonal Antibodies for the Treatment of Cancer

Dr. Seymour Levitt, radiology professor of the University of Minnesota, presented a paper on the treatment of cancer at a plenary session on Thursday. Following are excerpts from his paper:

Monoclonal antibodies derived from a single clone of cells can be harvested in unlimited quantities from hybridomas grown in tissue culture or purified from high titre ascites fluid. Since these antibodies can be generated against various tumor-associated antigens on cancer cells, AoAb are useful in cancer research for diagnostic purposes. Although they are equipped to bind target cells, AoAb may not be lethal to cancer cells. This may limit their therapeutic potential. Therefore, methods to increase the activity of MoAb against target cancer cell populations are being explored. On method of enhancing activity is to covalently couple a cytotoxic agent to MoAb. Anti-cancer reagents known as immunotoxins (IT) are synthesized by conjugating MoAb to potent catalytic toxins.

In autologous BMT for leukemia, bone marrow is removed from remission patients, purged of residual leukemia cells using IT, and preserved until needed. The aim of ex vivo bone marrow purging with IT prior to autologous transplant is to eliminate as many leukemia cells as possible, while sparing healthy bone marrow stem cells.

The heterogeneity of neoplasms suggests the potential utility of combining strategies that are cytotoxic by unrelated mechanisms. Our laboratory has evaluated IT treatment combined with drug treatment for killing cancer cells. We used the cyclophosphamide congener mafosfamid (MF) added to the final 30 minutes of a 2 hour preincubation with IT for selective elimination of neoplastic T cells from human marrow. This strategy extended the final level of clonogenic kill 2-3 logs, resulting in a maximum elimination of 6.2 logs of neoplastic T cells and minimal toxicity to normal bone marrow progenitor cells. The presence of excess normal bone marrow did not reduce efficacy. Neither MF nor IT as a single modality reached the levels of kill achieved by the combination of IT and MF. Since ricin is a ribosomal protein synthesis inhibitor and MF inhibits DNA synthesis, the toxin may act against drug-resistant cells.

IT for systemic therapy

The systemic use of IT for in vivo cancer therapy has immense potential, provided that the high potency of these reagents can be maintained in vivo without the risk of nonspecific reactivity with normal tissue. In the case of intact ricin IT, the lactose blockade of the native galactose B chain binding region results in highly selective toxicity in vitro. However, receptors for ricin B chain occur in high numbers of eukaryotic cells; HeLa cells possess approximately 30×10^6 binding sites as measured in ^{125}Iodine (^{125}I)-labeled ricin studies. Furthermore, the binding affinity of B chain for the cell surface is 4-5 logs greater than the affinity of B chain for the extrinsic lactose added in our experimental model, presenting the possibility that the IT-lactose complex could dissociate in vivo. Thus, ricin A chain IT devoid of B chain have been used. In vivo murine studies show that A chain IT are not as potent as intact ricin IT, even in the presence

of potentiators. However, Phase I clinical trials for therapy of leukemia and malignant melanoma indicate that A chain IT may be useful and warrant further investigation.

Radioimmunotoxins

The labeling of AoAb with various radionuclides also provides an opportunity for the selective delivery of a cytotoxic signal to cancer cells. The killing of cells by radiolabeled antibodies occurs at a distance from the antibody binding site, and is a function of the energy and type of emission of the radionuclide. Killing likely results from the direct or indirect effects of irradiation on DNA or the plasma membrane, culminating in interphase or reproductive death. Although clinical diagnostic and therapeutic trials have been initiated using radiolabeled MoAb, a possible strategy to augment potency against heterogeneous solid tumors might be to employ radioimmunotoxins (RIT) that deliver the two different cytotoxic signals of toxin and radionuclide on the same antibody molecule.

The suitability of IT for cancer therapy was recognized along with the current widespread interest in antibody-directed cell targeting and the development of MoAb technologies. MoAb-intact ricin hybrids were synthesized as early as 1980. Since this time, ricin has demonstrated great potential for selective toxicity when linked to antibody to form target-specific IT. Bone marrow transplantation has provided an excellent opportunity to evaluate the selectivity and potency of IT ex vivo in experimental models and Phase I clinical trials. Combined immunochemo-therapeutic regimens are being investigated to augment the potency of these reagents for both ex vivo and in vivo treatment. Early indications are that radiolabeled IT represent useful anti-cancer reagents. The complexities involved in the systemic and regional use of IT against cancer require that factors such as LD_{50}, biodistribution, pharmacokinetics, and damage to non-target tissue be thoroughly examined prior to selecting suitable in vivo reagents. The roles of antibody subclass, FC portion, epitope recognition, and affinity are being evaluated as we strive to produce better IT for cancer therapy. While researchers in many interrelated disciplines are addressing the specific problems and prospects related to the safety and efficacy of IT, our experimental models and ex vivo clinical experiences at the University of Minnesota provide encouragement. ■

High Cost of Equipment is a Limiting Factor

"I think the future perspectives of radiology is very bright," says Dr. Seymour H. Levitt, radiology professor of the University of Minnesota. "A large number of advances and reports have been made in this metting and its obvious that work is going forward to improve radiology diagnosis and treatment of cancer."

Dr. Levitt, as a radiation therapist, said that he is most interested in cancer treatment. The use of MRI and other techniques for determining the stand of cancer are going to be very important, he said.

"At our institution, we are doing researches on heat treatment of cancer and on monoclonal antibodies that are labeled in the treatment of cancer,' Dr. Levitt said and added that his research team is very optimistic about the result of their researches. Commenting on the criticism that radiologists are heavily relying on high-priced sophisticated equipment, the American radiologist said that there is a limitation that radiologist can do with the basic research. It is more of problem in diagnostic radiology, he said. "In radiation therapy, you can still use laboratory techniques in mice and animals and do

Dr. Seymour Levitt

studies," explains Dr. Levitt, "but it is difficult in diagnostic radiology."

He also commented that one of the biggest problem faced by radiologists is the high cost of equipment and that the technology is so expensive that it makes wide use of the equipment very difficult. "I think it is one of the major limiting factors, particularly for some of the countries that do not have the resources."

Dr. Levitt is familiar with Koreans since a number of Korean students are taking training courses in radiation biology or in radiation therapy. In addition, the University of Minnesota has a lot of interchanges with Korean universities. "In fact, we are very much involved in the training of Koreans at the University of Minnesota," says Dr. Levitt. "Our university has a special relationship with Korean medical schools since the end of the Korean War, particularly with the Seoul National University."

This is Dr. Levitt's second visit to Korea, but he was greatly impressed by the changes that Korea has made in the last l0 years. During his stay in Korea, he intends to visit Kyungjoo for three days. Kimchi and bulgogi are among his favorite Korean foods.

Lecture

Recent Advances in Magnetic Resonance Imaging

Dr. Joseph K.T. Lee, professor of Radiology, Mallinckrodt Institute of Radiology Washington Univ. School of Medicine, is to give lecture today on the latest development in magnetic resonance imaging. Excerpts from the lecture follows:

In the last several years rapid progress has been made in the area of clinical magnetic resonance imaging. Since 1982, magnetic resonance imaging has become the procedure of choice in the evaluation of central nervous system and spine Magnetic resonance imaging has also assumed an ever-increasing role in the evaluation of musculoskeletal, cardiac and hepatic diseases. It also has proven to be useful in the staging of genitourinary neoplasms. During this presentation, we will review some of the more recent advances in clinical imaging.

1. Single breath-holding imaging.

This technique has been variously called FLASH, GRASS, SRPS, etc. In this technique, a very short TR (15-50 msec.) is used – about a factor 10 lower than what is used conventionally for partial saturation technique. Since imaging time is proportional to TR, this leads directly to corresponding reduction in imaging time. In order to avoid fully saturating the magnetization with a short TR, a flip angle less than 90° is substituted for the standard excitation pulse. An echo is generated by gradient reversal rather than by a 180° refocusing pulse. Because of the absence of 180° refocusing pulse, a shorter TE can be chosen with this technique than with the spin-echo method. The tissue contrast varies with the flipangle used. using this technique, a single section can be imaged in as short as 2 seconds, certainly within the single breathe holding of most patients. This technique shows great promise in eliminating artifacts related to respiratory motion. Our experience in using this method in different parts of the body will be reviewed.

Dr. Joseph K.T. Lee

2. Clinical use of a Helmholtz type surface coil.

A variety of surface coils have been used to improve spatial resolution of magnetic resonance imaging of the body. Most of the surface coils presently in use have a flat, single loop configuration which produces images that have a rapid signal drop off with increasing distance from the coil. The Helmhotz design surface coil provides a larger and more uniform field of view while retaining the high signal/noise and resolution capabilities of the single loop design. This Helmholtz type surface coil has been obtained from the surface coil were compared to those obtained from the body or head coil. The parameters which were assessed include patient tolerance, ease of patient positioning, image quality, signal to noise ratio, contrast sensitivity and lesion detectability/conspicuity. The strength and the weaknesses of the Helmholtz type coil will be discussed.

If time permits, recent advances in imaging of the cardio vascularlar system and contrast agents will also be high lighted.

Potential for Improvement in Radiation Therapy

Following are excerpts from the paper of Dr. Herman Suit, radiology professor of the Harvard Medical School. He presented this paper on Thursday during the plenary session on radiation oncology.

There is rich potential for important advances in the efficacy of radiation therapy. The general strategies for achieving these improvements are: 1) employ superior does distributions; 2) use strategies which increase the differential in response between tumor tissue and normal tissue which favor the latter; 3) develop means for predicting response of tumor and/or normal tissues in individual subject and devise a treatment strategy for the particular patient in accordance with findings of the predictive tests; and 4) increase our knowledge of the natural history of the disease both with respect to patterns of local and regional extension as well as frequency and anatomic distribution of metastatic disease.

The efforts to increase the efficacy of radiation are directed towards increasing the probability of tumor eradication and or reduction of treatment related morbidity. There is growing attention to the latter goal and this applies to all modalities (radiation alone or in combination with surgery or chemotherapy, chemotherapy, or surgery alone).

In this presentation, I wish to consider efforts directed towards employment of improved dose distributions and to comment briefly on the potential for developing methods for predicting response and to mention recent symposia on the combination of radiation and chemical agents, chemotherapeutic compounds and radioprotectors.

Superior dose distribution means that a smaller treatment volume is employed but one which nonetheless encompasses the target tissues at each treatment session. The basis for an interest in improving dose distribution or utilizing a smaller treatment volume is that the tolerance of the patient to radiation is increased. The result of such an improved tolerance is that the radiation dose to the target structures may be increased. This will mean a higher tumor control probability. As the volume of normal tissue to full dose is diminished the frequency and severity of tissue related morbidity should go down. Target tissue means those tissues which are defined as being involved by tumor.

In modern radiation therapy there are usually two or three separate target volumes. The initial target volume includes not only the grossly or radiographically evident lesion but those tissues suspected of involvement on a microscopic or subslinical basis. This initial target volume is usually treated to a dose of about 50 Gray in 5 to 5 1/2 weeks in the instance of epithelial or mesenchymal tumors. The final target volume is usually the clinically or radiographically evident lesion. This will be the volume of tissue which will receive the "boost" dose. For many situations there may be an intermediate target volume. Accordingly, the planning of radiation treatment must include treatment volumes of each of the three successively smaller target volumes.

The treament volume is, of course, always larger than the target volume. This is necessary in order that the treatment volume encompasses the target volume on each and every treatment session with allowances being made for errors in alignment of the target structures, vis a vis the radiation beam, patient motion during an individual treatment session, and changes in patient or target structures during the course of a treatment. The concept of an improved dose distribution can be visualized by reference to Figure 1. Here is shown a highly schematized patient contour. The central darkly thatched area is the target. The treatment volume is shown to be larger than the target volume. Any improvement in radiation technique which allows the treatment volume to approach more closely the target volume will result in greater tolerance. ■

Sacrifice of Private Life for a Perfect Preparation

Miss Kim Kyong-Ok

Miss Kim Kyong-Ok, coordinator of Bridge International, Inc., a convention organizer which worked together with the AOCR Organizing Committee, is one of those who contributed much to the successful hosting of this Congress. She handled almost all correspondences with foreign radiologist who are now taking part in the Congress. "I am very glad to meet the foreign participants here since I corresponded with them in the process of inviting them," says Kim, who worked with the Organizing Committee in the last two years to prepare the 5th AOCR.

In the last six years, she handled six international conferences including the Asian-Oceanian Congress of Nuclear Medicine held in 1983, with about 1,000 scholars from around the world participating. "This, however, is the largest international conference that I ever experienced," says Kim, noting that the technical and scientific exhibitions added color to the Congress.

The preparation work for the AOCR was not that easy due mainly to the medical terminologies, particularly in organizing technical exhibitions. But, Kim is pleased to see that more exhibition booths than originally expected were sold, showing the popularity of the exhibition among the exhibitors.

"I invested my private life for the preparation of the Congress," Kim proudly says. "Our company also accumulated experience in handling such a giganic conference." She also mentioned that Dr. Man Chung Han, secretary general of the 5the AOCR, paid careful attention to its organization to make it a perfect meeting. ■

Impressive Korean Night Performance

Fanelli Liana, wife of Italian radiology professor Aldo Fanelli from Rome, said that she joined some of the ladies programs. "The organization has been perfect and I really enjoyed the Korean Night at the Shilla Hotel," says the Italian lady. She also enjoyed shopping at downtown department stores and purchased such products as leather goods and furs.

She recalled that she participated at the International Congress of Radiology which was held in Honolulu two years ago and the exciting show she saw there is comparable with the Korean Night program.

Korean Prime Minister Kim Chung-Yul is to invite some participants to the 5th Asian-Oceanian Congress of Radiology to a lunchon on Friday afternoon at his official residence in downtown Seoul.

Fanelli Liana

Farewell Party Amid Korean Popular Songs

The farewell party was held at the Ball Room on Thursday night, with more than 800 radiologists and their accompanies participating. In his farewell speech, Dr. Chi Yul Ahn, president of the 5th Asian-Oceanian Congress of Radiology, said that he sincerely hope that the 5th Congress in Seoul would be an event that is long remembered by all the participants. "The success of the Congress was achieved not only but the constant efforts of the Organizing Committee but also to the positive support of the radiologists who take part in this meeting," said Dr. Ahn.

The president of this Congress also noted that he firmly believe that close cooperation and mutual friendship will be continued for the next Congress to be held in New Delhi, India, in 1991, as well as for many more to come.

Korea's popular singers such as Choi Jin-Hee, In Soon-Hee, Lee Eun-Ha and Kim Jong-Im entertained the participants. And the stage was open to everybody who wish to perform, thus providing an excellent opportunity to share friendship among the radiologists from Asian and Oceanian countries.

Deep Appreciation to the Organizers

As we come to conclude our 5th Asian-Oceanian Congress of Radiology, I would like to express sincere appreciation to you for your positive cooperation and kind effort to make the Congress a great success.

During the last five days since 21st September when we opened our Congress, presentations were made on the results and achievement of research and clinical experience associated with various fields of rapidly developing radiology, and followed by constructive discussion.

Through special lectures by the guest speakers, symposium, and presentations of many papers, we have learned a great deal concerning the latest development and trend of radiology. In addition, Korean Night, Official Congress Tour and other social activities have provided us with invaluable opportunities to strengthen our close friendship among radiologists not only in the Asian and Oceanian region but also all over the world.

Particularly we are grateful to Dr. Alexander R. Margulis, Dr. Joseph K.T. Lee and other guest speakers who have well domonstrated their devotion to the academic enhancement. We should like also to express our deep gratitude to all those who have presented their papers on their research and accomplishment as well as to technical exhibitors who have kindly displayed radiological instruments.

Through the Congress, we became aware of the fact that development made in the past on radiology will greatly be surpassed in the future for its speed of development and the scope it covers.

In this regards, the effort should be continued by Asian-Oceanian Society of Radiology in increasing exchange of visits among ourselves to promote long standing friendship. We firmly believe that our effort will certainly be made in this direction by the host country India of the next Congress.

In conclusion, I would like to extend my deep appreciation and compliment to the Secretary General, Professor Man Chung Han and members of the Organizing Committee for their immeasurable contribution for the success of Congress.

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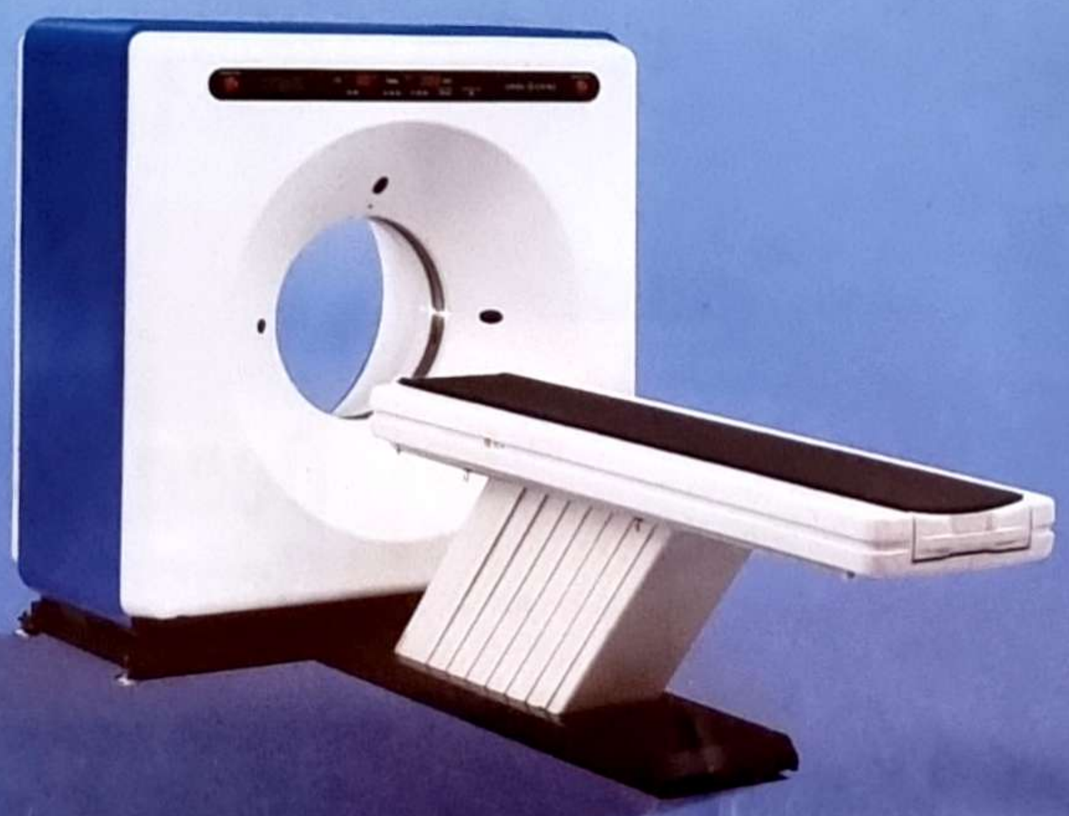

New CT MAX: ahead of its class in performance and affordability

The CT MAX™ system from GE is a breakthrough in computed tomography. Remarkably affordable, CT MAX offers the excellent image quality and sophisticated performance that, until now, was only available in systems costing considerably more.

Compact size is another major advantage. CT MAX easily fits in a 16′ x 18′ room (30 m²), so it's practical for spaces and places where CT never fit before.

And it's extremely easy to use: the console is virtually self-teaching and, with the built-in CT camera, filming is fast and convenient.

The performance–outstanding images across a complete range of applications–is everything you expect from GE. And the affordability makes CT MAX the best value in CT today.

For a closer look, contact us today. CT MAX. It will change the way you look at CT.

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