Association of Radiation Oncologists of India

Regd. No. 458-Act XXI of 1850

June 2006 | Volume 2 | ISSUE 1

NEWS LETTER

FROM THE SECRETARY'S DESK !

Dear Members

All the members of AROI are requested to contribute their maximum in the forthcoming 28th National Conference from 30th Nov. to 3rd Dec 2006 in Varanasi. On first day, there will be ICRO session followed by the conference. We (AROI exec. committee, ICRO exec. Committee & organizing committee for 28th National Conference) are in process of finalizing the scientific in programme & are open to your suggestions regarding the improvement of Scientific Sessions. The current topics in the field of radiation oncology will also be discussed in forthcoming AROI Conference to update knowledge.

The information regarding best paper award and Frank Neal & Joseph fellowship is as follows :

BEST PAPER AWARD:

Candidates should submit / send their abstracts and full papers up to Aug. 06. The exact date will be intimated soon. The candidate should fulfill following criteria to be eligible for the Award:

1.AROI Member
2.PG student / Sr. Residents upto 2 yrs.
3.FULL PAPER (soft & hard copy be sent)
4.AUTHORITY LETTER FOR PUBLICATION IN AROI JOURNAL
5.FOR MEDICAL PHYSICIST

The following are required:

1.AROI member
2.Jr. Medical Physicist up to 35 Yrs of age.
3.With authority letter for publication in the AROI Journal.
4.Full paper (soft & hard copy be sent)

FRANK NEAL & JOSEPH FELLOWSHIPS : -

This fellowship (one month observership in any higher Centre in India) helps the upcoming younger generation of Radiation Oncologists to upgrade their knowledge about the latest Developments in the field of Radiation oncology.

The criteria for this award is:

1.AROI Member
2.M.D/D.N.B should be complete.
3.Age limit upto 35 yrs of age.

Lastly I again request all the members to actively participate in the conference & make it a grand success.

Regards

Rajesh Vashistha.
Secretary General, AROI

FROM THE EDITORIAL BOARD

Dear colleagues,

Greetings from the editorial board. The preparation for our Annual National Conference at Varanasi is in full swing. It is requested to all of you to participate in it to make the conference a grand success. I assure you on the behalf of organizing committee that it will be a grand and memorable feast blended with a holy atmosphere, thought provoking scientific interaction and traditional hospitality of Banaras.

You are requested to intimate if there are any changes in your or your colleagues address to Secretariat without any delay, so that you can get the ballot paper at the Right time.

Hope you will co-operate to us to make the election procedure fair and easy.

Yours truly,
(Dr. Virendra J. Vyas)

The following points are on the agenda of General body meeting to be held on 02/12/2006 in 28th AROICON -Varanasi, U.P.

- Routine report in the GBM highlighting the activities and achievements of AROI and the various financial & technical aspects of the functioning.

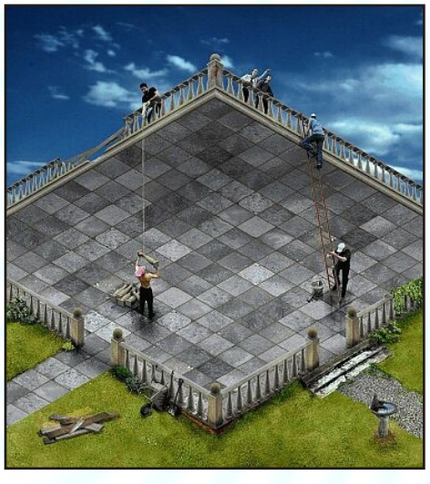
- Report from Dr. Subir Ganguly regarding the Constitution of AROI and the amendments required in it and it would be notified to members

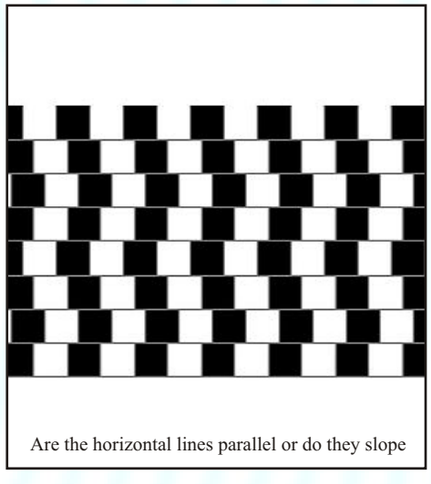
- Dr P. K. Julka's report regarding the practice of Chemotherapy by the Radiation Oncologists & as the name of the discipline has been changed to Radiotherapy & Oncology the same to be notified to the members.

- Selection of the Venue for **AROICON-2008** is to be decided at the GBM and it is highly recommended that EAST zone of AROI should aggressively & zealously pursue this option as already previous **AROICON** have been/ will be hosted by the NORTH, WEST, & SOUTH zone of AROI. (As discussed in GBM in TMH that conferences to be held zone wise)

We require current suggestions for **AROICON-2006** from the members to the AROI exec. Committee ICRO exec Committee & Organizing Committee as the 3 bodies are in process of finalizing the Scientific Programme. The idea & philosophy behind this is to objectify scientific programme & to delver the targeted audience a take-home message regarding clear guidelines regarding Cancer Diagnosis & Treatment.

Courtsey : Dr. M.L. Bhatt





Are the horizontal lines parallel or do they slope

Evidence-based Evidence

The clinical practices vary from place to place without any justifiable reason. It has been known that conventional wisdom rely on expertise and not on systematic review of the evidence. In 1972, while evaluating effectiveness and efficiency of health services in United Kingdom, Archie Cochrane concluded that 'commonly used procedure and therapies were not always the most efficacious' and that 'a substantial amount of practice had not been well evaluated'. In past few decades we have seen a revolution in medical practice. It has also been commented that new medical technologies has been influenced more by commercial, professional and public pressures than by a coherent policy for assessing their relative values. There is need to develop countrywide infrastructure to support 'evidence-based practice'. We know that the decisions based on research evidence are usually better than decisions based on clinical judgment alone. The available evidence-based guidelines for few cancers have transformed medical practice and now should be a routine part of medical training. The meta-analysis and randomized trials are the proof of change of practices. Let us organize to equip ourselves to collect evidences, so that future decisions will not be based on the individual experience or the studies not based on our patients. A network and open dialogue will be of great help in this regard.

The field of Radiation Oncology is expanding in complexity. To achieve competency, vigilance is required. We need to evaluate the training in Radiotherapy. Various training organizations are evaluating themselves for refining the training parameters. When a doctor enters into practice and gains little experience, s/he can evaluate the adequacy of training given to them. In USA pediatric oncologists have recently, surveyed the training programme among 239 practicing pediatric oncologist specialist. These have passed-out between 1999 and 2003. Eighty percent expressed that their training was less adequate in behavioral psychology, palliative care and managerial skills in office practice. These are the areas we do not even touch during post-graduate training in Radiotherapy. The major factor is we need regular programme for assessment of training improving the quality of training. The world is successfully moving towards virtual class rooms and virtual patients for teaching. The CMEs conducted are insufficient and needs to be structured. The ICRO should have more interaction with students for their needs also the students also should come forward and have dialogue with ICRO for drafting the regular programme.

SK Shrivastava, Chairman ICRO

Cochrane A. Effectiveness and Efficiency, random reflections on the health service. Nuffield Provincial Health Trust, 1972

Lieberman L, Hilliard RI, How well do pediatric residency prepare residents for clinical practice and their future carrier. Med Edu 40(6): 539-46, 2006.

Steves A, Hernandez J et al. The use of virtual patients to teach medical students history taking and communical skills. Am. J. Surg 191(6):806-811, 2006

MAMMOSITE

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Management of operable breast cancer has undergone radical change since the Halstedian era. Breast Conservation has been one of the most important consideration for the operable breast cancer patients in the recent times. Post-operative radiation has been the integral part of management in majority of such patients. The conventional radiotherapy in the form of external beam radiotherapy has several undesirable long term toxicities in such conserved organs. The medical community has been exploring alternative ways to offer radiation treatment with the help of brachytherapy for The patients undergoing breast conservation therapy.

Edited by :
Dr. Parveen Kaur, Dr. Sandhya Sood, Dr. Ishu Sharma

Brachytherapy for the Breast Conservation

Brachytherapy can be done with the help of multi-catheter conventional method or with the help of mammosite, a new technique.

Multicatheter internal radiation therapy:

For many years, internal radiation therapy has primarily been delivered using a complicated multicatheter implant method that requires up to 25 catheters to be placed in the breast. After placement, the radioactive seed is delivered into each catheter to treat the target area.

Mammosite:

One of the innovative methods of brachytherapy is with the help of mammosite.

In this form of brachytherapy a radiation source is inserted inside a balloon which is placed in the mastectomy cavity. This has three important advantages:

1. It places the radiation inside the lumpectomy cavity. The radiation is targeted to the area where cancer is most likely to recur.
2. Radiation is delivered from within the cavity, limiting the amount of radiation to healthy tissue, thereby reducing the potential for side effects.
3. The therapy can be completed in 5 days.

MammoSite Radiation Therapy System (RTS) is a new minimally invasive method of delivering internal radiation therapy following a lumpectomy for breast cancer. Therapy is given on an outpatient basis, there is no need to stay in the hospital and can be completed in a short time period (as short as 5 days).

The MammoSite RTS is a single small balloon catheter that fits inside the tumor resection cavity. A tiny radioactive seed, connected to an afterloader, is inserted into the balloon that delivers the radiation therapy. This focuses the radiation dose on the area of the breast at highest risk for tumor recurrence. Radiation therapy with the MammoSite RTS is performed over a 1- to 5-day period. When used alone, patients typically receive treatments twice a day for 5 days. The MammoSite RTS may also be used as a boost therapy in conjunction with external beam radiation.

The Procedure

After lumpectomy, an uninflated MammoSite RTS balloon is placed inside the tumor resection cavity. The *applicator shaft,* a tube connected to the balloon, remains outside the breast (Figure 1). Once in place, the balloon is inflated with *saline* and a contrast agent, inserted through the applicator. The balloon is filled to fit the edges of the cavity (Figure 2). The balloon remains inflated for the entire time when patient is receiving radiation therapy (usually 5 days).

By placing the balloon inside the tumor resection cavity, the radiation source will be directly next to the part of the breast that is at the highest risk for tumor recurrence.

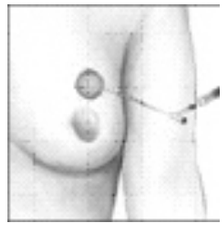
The MammoSite RTS can be inserted either:

- During the lumpectomy procedure
- In a separate procedure under local anesthesia up to 10 weeks after the lumpectomy

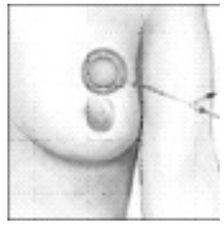
After the MammoSite RTS is inserted, that area of the breast is cleaned and bandaged and patient may go home.

Once the balloon is in place, the radiation therapy can start. Treatment with the MammoSite RTS is given on an *outpatient basis.* When used alone, typical treatment with the MammoSite RTS would require 2 fractions per day for 5 days. If used as a boost with external beam radiation, the MammoSite RTS will require 2 fractions for just 1 day. Radiation is emitted by the radioactive seed attached by a wire to an *afterloader*. The seed travels through the MammoSite RTS applicator into the inflated balloon (Figure 3). Once the final session is completed, the balloon is deflated and the MammoSite RTS is easily removed. Patient may not even require anesthesia for the removal (Figure 4).

After tumor removal surgery, an uninflated MammoSite RTS balloon is placed inside the tumor resection cavity.



Once in place, the balloon is inflated with saline and a contrast agent, inserted through the applicator.



After radiation treatment, the balloon is deflated and easily removed.

NANOTECHNOLOGY: NOVEL TECHNOLOGY OF NEAR FUTURE

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The term "Nanotechnology" was defined by Tokyo Science University Professor Norio Taniguchi in a 1974 paper (N. Taniguchi, "On the Basic Concept of 'Nano-Technology'," Proc. Intl. Conf. Prod. Eng. Tokyo, Part II, Japan Society of Precision Engineering, 1974.) as follows: "'Nano-technology' mainly consists of the processing of, separation, consolidation, and deformation of materials by one atom or one molecule." In the 1980s the basic idea of this definition was explored in much more depth by Dr. Eric Drexler, who promoted the technological significance of nano-scale phenomena and devices through speeches and the books. **Nanotechnology** comprises technological developments on the nanometer scale, usually 0.1 to 100 nm (1/1,000 μm, or 1/1,000,000 mm). This is about ten thousand times smaller than the width of a hair. The term has sometimes been applied to microscopic technology. Nanotechnology is any technology which exploits phenomena and structures that can only occur at the nanometer scale, which is the scale of several atoms and small molecules.

Nanotechnology in early detection of cancer and treatment

Nanotechnology has the potential to have a revolutionary impact on cancer diagnosis and therapy. It is universally accepted that early detection of cancer is essential even before anatomic anomalies are visible. A major challenge in cancer diagnosis in the 21st century is to be able to determine the exact relationship between cancer biomarkers and the clinical pathology, as well as, to be able to non-invasively detect tumors at an early stage for maximum therapeutic benefit. For breast cancer, for instance, the goal of molecular imaging is to be able to accurately diagnose when the tumor mass has approximately 100-1000 cells, as opposed to the current techniques like mammography, which require more than a million cells for accurate clinical diagnosis.
In cancer therapy, targeting and localized delivery are the key challenges. To wage an effective war against cancer, we have to have the ability to selectively attack the cancer cells, while saving the normal tissue from excessive burdens of drug toxicity. However, because many anticancer drugs are designed to simply kill cancer cells, often in a semi-specific fashion, the distribution of anticancer drugs in healthy organs or tissues is especially undesirable due to the potential for severe side effects. Consequently, systemic application of these drugs often causes severe side effects in other tissues (e.g. bone marrow suppression, cardiomyopathy, neurotoxicity), which greatly limits the maximal allowable dose of the drug. In addition, rapid elimination and widespread distribution into non-targeted organs and tissues requires the administration of a drug in large quantities, which is often not economical and sometimes complicated due to non-specific toxicity.

This vicious cycle of large doses and the concurrent toxicity is a major limitation of current cancer therapy. In many instances, it has been observed that the patient succumbs to the ill effects of the drug toxicity far earlier than the tumor burden.

There are potential benefits in terms of skin care and protection, advanced pharmaceuticals, drug delivery systems, biocompatible materials, nerve and tissue repair, and cancer treatments. Other industrial benefite includes catalysts, sensors and magnetic materials and devices. On the other hand, critics of nanotechnology point to the potential toxicity of new classes of nanosubstances that could adversely affect the stability of cell membranes or disturb the immune system when inhaled, digested or absorbed through the skin. Objective risk assessment can profit from the bulk of experience with long-known microscopic materials like carbon soot or asbestos fibers. Nanoparticles in the environment could potentially accumulate in the food chain. Thus, Nanotechnology seems to be very promising, although it's still too early to say anything concrete.

Brief Summary of the National Brachytherapy Update 2006 was held on 20th & 21st of May 2006.

The National Brachytherapy Update 2006 was held on behalf of Indian Brachytherapy Society. Hosted by Bangalore Institute of Oncology. It was co-sponsored by:

1. The Indian College of Radiation Oncologists
2. Rajiv Gandhi University of Health sciences
3. Karnataka Medical Council, Bangalore
4. Medical Education Research Trust, Karnataka.

It was two days update. It was inaugurated by Prof. K.A. Dinshaw. Topics covered are Breast, Head & Neck, GIT, Gynaec & Prostate Cancer. We had seven guest lectures topic were Past, Present & Future of Brachytherapy, Safety & Regulations of Brachytherapy Practice in India, Soft Tissue Sarcoma, Radio Biology of HDR, Hyperthermia in Brachytherapy. About 150 delegates from all over India attended the update. After the two days deliberations an Indian Recommendation on HDR Brachytherapy was drafted. This will be scrutinized and will be finalized in next three months.

Course was directed by Prof. Ramesh S. Bilimagga. For further on the same please Contact Dr. G. Kilara.

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References:
1. Paul McNamara. Opioid switching from morphine to transdermal fentanyl for toxicity reduction in palliative care. Palliative Medicine 2002;16:425–434
2. Radbruk L et al. Transdermal Fentanyl for the management of cancer pain: a survey of 1005 patients Palliative Medicine 2001; 15:309-321
3. Kyriaki M et al., Pain Management of cancer patients with Transdermal Fentanyl: A study of 1828 step I, II & III transfers. The Journal of Pain. Vol5, No. 2(March), 2004 119-132.
4. Kelly J. Understanding transdermal medication. Profess Nurse 1994; 9(11): 121-125
5. Data on File

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