DCF NewsLETTER

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DHARAMSHILA HOSPITAL
YOUR PARTNER IN CANCER CARE

DHARAMSHILA 23 years Adding quality to life

Dear Friend,

I am sure you must be feeling happy with the prospect of having a stable Government. All of us are hoping for a better Health Minister, who can look into Healthcare with a 360° view; amend health policies; get better percentage of GDP allocated for health budget and make us all free from the menace of corruption. To root out corruption, all of us have a major role. Let us all do introspection, find out the root cause of corruption in medical practice and work collectively to liberate our profession from this menace. Some of us are responsible for tainting the profession and we have to do something collectively to revive the lost glory of this noble profession.

I am very pleased to share with you that our efforts of making public aware about their risks of getting cancer; extensive free cancer detection services (inside the hospital and at various other locations) and CME Programmer have paid rich dividends. Our percentage of getting patients with early disease has increased and subsequently the number of disease free patients have also increased. It is indeed very satisfying to see more and more patients cured / in remission, especially children and young adults after getting Bone Marrow Transplants.

Dr. Sarita Jaiswal has joined back after completing six months of Fellowship in Bone Marrow Transplantation from Fred Hutchinson Cancer Research, Seatle Cancer Care Alliance (SCCA), Seatle, Washington, USA. This is the largest BMT Centre, where BMT was initiated by the pioneering work of Prof. E. D. Thomas.

SCCA performs over 500 BMTs per year with niche in matched unrelated donor; cord blood transplants, Haploidentical BMT, Natural Killer (NK) Cell infusions, CART Cell Therapy, Tanden Autologus and Allogenic BMT for high risk lymphoma. Dr. Jaiswal has achieved enormous experience in all these procedures at SCCA. In addition, Dr. Jaiswal is the only BMT Physician trained and experienced in Clinimacs based T cell and NK Cell manipulated Haploidentical BMT. Dharamshila BMT Centre has now initiated Clinimacs based Haploidentical BMT Under the leadership of Dr. Sarita Jaiswal.

Looking forward to your support for improving cure rates.

Thanking you,

Yours Sincerely

Dr. S. Khanna
President, DCFRC

LUNG CANCER – RECENT CHANGE IN MANAGEMENT

Lung cancer is the leading cause of cancer- related deaths in western countries as well as in India, with non-small cell lung cancer (NSCLC) accounting for more than 85 % of primary lung cancers. As per recent data from GLOBOCAN 2008 by the International agency for Research on Cancer, Lung Cancer is the most commonly diagnosed cancer worldwide (1.61 million, 12.7 % of the total) and also the leading cause of cancer death (1.38 million, 18.2 % of the total). The number of deaths due to the lung cancer are nearly equal to that of colon, breast, prostate and pancreatic cancer combined together. In India, there were 51,000 deaths due to lung cancer in 2008 and this was nearly half (26,000) 5 years ago. The analysis by Indian Council of medical Research (ICMR) revealed that in 1998, lung cancer was negligible in women and was not one of the top 10 cancers affecting females; in 2008 the ratio between men and women became 3: 1.

The risk of developing lung cancer increases with the amount and duration of smoking. In Indian patients with lung cancer, history of active tobacco smoking is found in 87% of males and 85% of females. History of passive tobacco exposure is found in3%. So 90% of all cases result from tobacco exposure.The percentage of tobacco-related products smoked in India are beedi (28.4 - 79%), cigarettes (9.0 - 53.7), hooka (3.4 - 77.3), and mixed (7.5 - 13.6).

The Problems in the Management of Lung Cancer

Most cases are in advanced stages; many are misdiagnosed as tuberculosis and erroneously managed for varying periods prior to diagnosis. The burden of misdiagnosis and delayed diagnosis on the health-care system is profound; it creates a larger population with advanced or incurable disease. Stage of cancer at diagnosis being a key prognostic factor, this deprives us of the advantage of an early

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diagnosis and the consequent treatment benefit. A late diagnosis in most cases leaves palliative chemotherapy as the only treatment option in our practice.

Radiotherapy can be used as adjuvant therapy or in a localized form for palliation of symptoms.

Another problem lies in subclassification of the type of NSCLC. The reason being inability to take larger tissue sample for further testing. Even now-a-days, some centres are treating these cases just on the basis of FNAC report. The radiologist must ensure that imaging-guided biopsy/cytology is done with accuracy so as not to have to repeat it.

Clinical Spectrum of Primary Lung Cancer in India

It was found in a series of 1,009 lung cancer cases by Jindal and Beherathat. Both the mean and peak ages of lung cancer in India were lower compared to the West (54.3 years) .The smoker to non-smoker ratio was 2.7:1. Most of the patients had advanced disease and 51.8% had evidence of metastases. The commonest presentation was a mass lesion with or without collapse in 68%; 25% had pleural effusion; and 16.7% had superior vena caval compression syndrome. Squamous cell carcinoma was found in 34.3%,anaplastic in 27.6%, adenocarcinoma in 25.9%, and unclassified in 12.2%.

Clinical Diagnosis of Lung Cancer

The symptoms like fever, cough, expectoration, haemoptysis, weight loss and anorexia are common to boththtuberculosis and lung cancer. Since, tuberculosis is rampant in India, it is not uncommon to find a lung cancer being treated as tuberculosis initially. But age of the patient, smoking history, mediastinal symptoms like hoarseness of voice, SVC obstruction and dysphagia etc. will favour lung cancer diagnosis. Physical examination should look for signs of collapse or mass, clubbing, metastatic and non-metastatic complications of lung cancer.

The duration of symptoms before lung cancer is diagnosed are <3 months in 32.6 - 44% cases, 3-6 months in 16.0-34.3%and >6 months in 21.0- 40 %. Most cases were treated as tuberculosis for varying periods of time before a diagnosis is made.

Dramatic Transformation in the Management

What is it that has driven this transformation? It is the knowledge that survival even in stage IV NSCLC can now be doubled with excellent quality of life if patients are treated with oral therapy when this is selected appropriately. Epidermal growth factor receptor (EGFR) mutation testing is the classical example.

The real incidence of EGFR mutation in patients with NSCLC is between 25 and 40%. It will be higher if samples are from patients with adenocarcinoma alone and lower if all patients with lung cancer are included. Similarly, the incidence will be higher if next-generation sequencing (NGS) technology is used and lower if only known mutations are identified using a limited number of polymerase chain reaction (PCR) primers.The incidence of EGFR mutations is higher in women, non-smokers, and patients with adenocarcinoma histology.

It is not an uncommon situation, where the patient is commenced on standard platinum doublet chemotherapy before the result of the EGFR testing becomes available. What if, such a patient is found to have a mutation? It has been found that it is better for such patients to complete the chemotherapy and then use switch maintenance with oral TKIs (tyrosine kinase inhibitors, gefitinib/ erlotinib). As EGFR mutation also predicts better response to chemotherapy, it remains to be seen whether this is the result of switch maintenance alone.

Conclusion

The newer systemic therapies for NSCLC are directed towards specific targets but their efficacy will be strongly influenced by inherent tumor heterogeneity and the multiple robust and compensatory signalling pathways involved in tumor homeostasis. Therefore, identification of genotypes that respond better to specific therapies, thus actually adjusting the therapies to the genetic profile of the patients, remains an important and interesting issue.

These first steps towards personalized medicine represent a shift in the management of NSCLC. Indeed, NSCLC should no longer be viewed as one common generic tumor but rather as a collection of more rare tumors with differing biological behaviours and different sensitivities to various systemic treatments.

Dr. Deni Gupta
Consultant - Medical Oncology

HYPOFRACTIONATED RADIOTHERAPY FOR FAVORABLE RISK PROSTATE CANCER

Hypofractionated radiation therapy (RT) has been suggested as an attractive strategy to improve treatment results in localized prostate cancer. In contrast to most other tumors, prostate cancer seems to have a low / ratio and thus an improvement in the therapeutic ratio could be obtained by irradiating patients with treatment schedules using fewer, but larger dose per fraction of irradiation (hypofractionation). In addition to a possible radiobiological benefit, hypofractionated RT allows for a useful shortening of the overall treatment time with its potential benefit in patient's convenience and reduction in the cost of treatment.

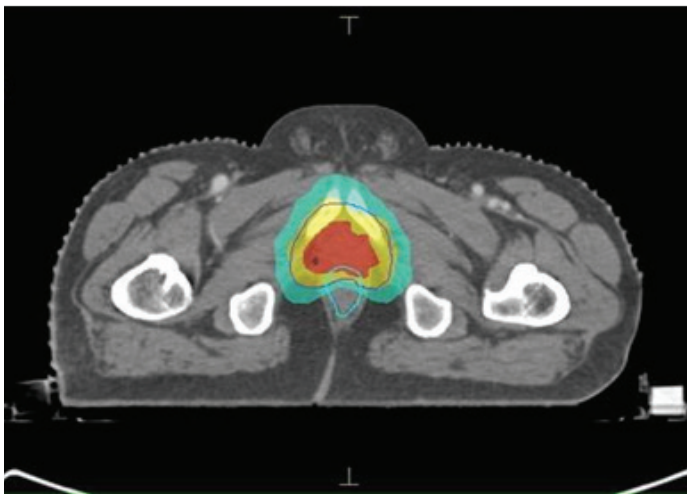
Randomized trials have shown a better biochemical control when higher total doses of conventionally fractionated irradiation are delivered to the prostate However, dose escalation with standard fractionation improves biochemical-free survival at the expense of prolonging the overall duration of the treatment. Early results from several hypofractionated trials indicate that this approach has been safe and provide biochemical control, at least, similar to conventionally fractionated high-dose radio-therapy.

The 5-year actuarial biochemical control rate of upto 98% is promising. The incidence of acute toxicity was low and similar to other radiotherapy regimens. Overall, the crude risk and severity of chronic late GI and GU toxicity seems to be in line with other fractionation schemes that delivered similar BED and the rate of permanent latecomplication slow.

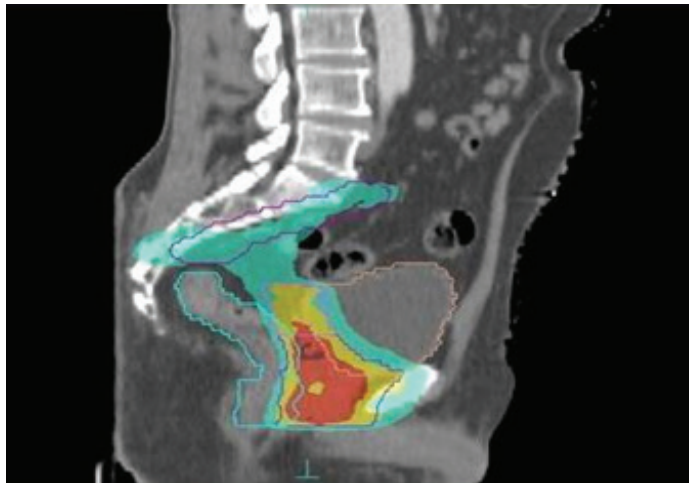
Minimising the Planning Treatment Volume (PTV) margin is a key factor when escalating dose, in order to keep the rate of moderate and severe late toxicity as low as possible. Consistency in target volume positioning is also instrumental in success of hypo fractionated radiation therapy to prostate .Consistency in target organ positioning is assisted by maintaining a constant bladder volume and ensuring the emptying of the bowels before each fraction. The use of a rectal balloon for prostate immobilisation and rectum distension has been used in various centres, however in a few trials one third of patient's experienced rectal probe repositioning errors leading to maximum prostate deviations of up to 2.99 cm in cranio-caudal direction.

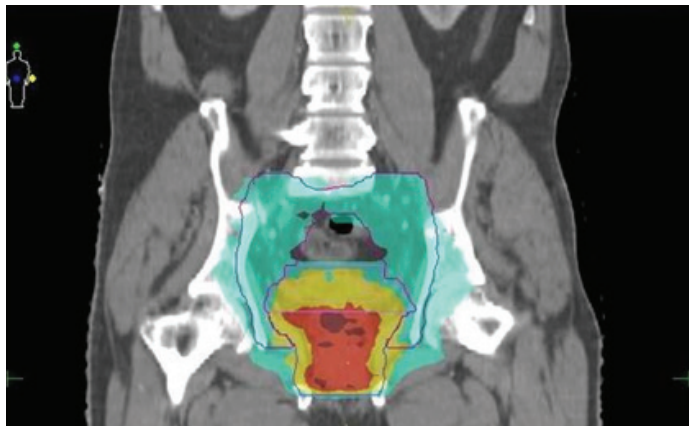
More precise target verification then becomes mandatory for hypofractionated therapy. There are various Image Guided Radiation therapy (IGRT) procedures available to correct target localisation and correcting positioning errors. An ultrasound-based daily repositioning system allows for prostate localisation immediately before each radiotherapy fraction with patient in treatment position.

Radio-opaque markers implanted into the prostate and visualised in portal images on a daily basis are another and very promising tool to verify the prostate position during a radiotherapy session. The prostate may be imaged directly with or without implanted markers and compared with the original planning CT scan. An adaptive correction strategy of organ at risk volumes in repeated CT scans during the treatment period may lead to an overall reduction in systematic error.



Usage of techniques like volumetric arc therapy (VMAT) further reduceintrafractional movements and ensure proper target coverage and avoidance of organs at risk. VMAT based hypofractionated radiation therapy under image guidance for favourable risk prostate cancer is novel approach with good clinical outcomes.





Dr. Manish Pandey
Sr. Consultant Radiation Oncology

Dr. Kanika Sharma
Consultant Radiation Oncology

DCH Update

Date	Activities	Doctors	Venue
04-05-2014	Cancer Screening Camp & Cancer Awareness Talk	Dr. Manish Pandey Dr. Savera, Dr. Vishal	Trilok Appt. Patparganj
11-05-2014	Cancer Screening Camp & Cancer Awareness Talk	Dr. Savera, Dr. Shilpapandita	IMA East Delhi Karkardooma
12-05-2014	Health Camp	Dr. Varun Dahia Dr. Vishal	Hcentive Technology Pvt. Sec-59, Noida
16-05-2014	Cancer Screening Camp	Dr. Savera , Dr. Vishal	Suvidha Engg. Sec- 59, Noida
18-05-2014	Health Awareness Talk	Dr. S. Khanna	MAMC Auditorium Delhi
18-05-2014	HealthScreening Camp	Dr. D. P. Majumdar Dr. Anil Tomer	DHRC Delhi
21-05-2014	Cancer Screening Camp	Dr. Savera, Dr. Vishal Dr. Varun Dahia	Smile Motherson Sec-59 Noida
25-05-2014	Cancer Screening Camp	Dr. Savera, Dr. Vishal Dr. Varun Dahia	RWA Sec-12, Noida
01-06-2014	Cancer Screening Camp	Dr. Savera, Dr. Vishal Dr. Varun Dahia	RWA, Kavi Nagar Ghaziabad

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DHARAMSHILA HOSPITAL
YOUR PARTNER IN **CANCER** CARE

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FACILITIES AVAILABLE

DIAGNOSTIC SERVICES

Radiology and Imaging Services
- PET CT Scanner with HD Technology
- Gamma Camera for Nuclear Scans
- 16 Slice Multi Detector CT Scanner
- 1.5 Tesla Magnetic Resonance Imaging (MRI)
- Mammography
- Ultra Sonography Scans
- Colour Doppler Vascular & Cardiac Studies
- CT /USG guided interventions
- Image intensifier – C-Arm
- Digital Radiography
- Interventional Radiology

Cardiopulmonary Lab
- ECG - Holter Test - TMT, PFT
- Stress/Dobutamine Echo with Colour Doppler

Laboratory Services
- Histopathology - Haematology
- Cytopathology - Biochemistry
- FNAC & Guided FNAC - Clinical pathology
- Frozen Section - Microbiology
- Immunohistochemistry
- Tumour Markers
- Cytochemistry
- Serology
- 24X7 Blood Bank with Apheresis and Blood Components facility

Endoscopic Suite – Full Range of Fibre-optic
Endoscopic Procedures

RADIATION ONCOLOGY

- Triple energy Linear Accelerator with Volumetric Arc Therapy (VMAT)
- IGRT, IMRT, 3D Conformal Treatment
- Stereotactic Body Radiation Therapy (SBRT)
- Stereotactic Radio Surgery (SRS) and
- Stereotactic Radio Therapy (SRT)

MicroSelectron Digital (HDR-V3) Brachytherapy Afterloader Intracavitary, Intersitial, Intra luminal and Surface mould

Treatment Planning Systems

(Eclipse, CMS Xio, Monaco, ERGO++, Plato Sunrise)

SURGICAL ONCOLOGY

- Head and Neck Cancer Surgery
- Esophageal Cancer Surgery
- Breast Cancer Surgery
- Chest & Thorax Cancer Surgery
- Gynae Cancer Surgery
- Gastrointestinal Cancer Surgery
- Uro oncology surgery
- Neuro oncology Surgery
- Bone and Soft Tissue

MEDICAL ONCOLOGY

Chemotherapy Normal & High Dose Including
- Infusional Chemotherapy
- Targeted Therapy
- Immunotherapy / Biological Therapy
- Hormonal Therapy
- Site Specific Chemotherapy

HAEMATO ONCOLOGY (ADULT & CHILDREN)

State-of-the-art Blood And Marrow Transplant Centre
- Autologus BMT for Myeloma, Lymphoma, Paediatric tumours, Multiple Sclerosis and Auto-immune disease, not responding to the medical treatment.
- Allogenic BMT for Acute Leukemia, Chronic Leukemia, Lymphoma, Myeloma, Thalassemia, Sickle cell disease, Childhood genetic diseases, Immunodeficiency, Metabolic diseases, Solid Tumours and Auto-immune disease not responding to the medical treatment.
- Non-Malignant Hematology services to cater to patients with Thalassemia, Aplastic Anemia and others
- Excellent Blood bank facilities for Collection, Processing, enumeration and Cryopreservation of stem cells. BMT Labs are equipped with state-of-the-art equipments for Routine and Specialized Tests, HLA Testing, Bacterial and fungal cultures, Flow Cytometery, Conventional and Real Time PCR for viral pathogens, Molecular Biology Lab, Cell Culture Lab and Magnetic separation of cells using MACS technology.

ALLIED SPECIALITIES

Superspecialities
- Gastroenterology & Gastro-intestinal Surgery
- Nephrology – Dialysis
- Neuro Surgery
- Plastic and Cosmetic Surgery
- Pulmonology
- Urology

Specialities
- Dental
- Ear, Nose and Throat (ENT)
- General and Laparoscopic Surgery
- Gynaecology
- Internal medicine
- Orthopaedics (Joint Replacements)
- Rehabilitation & Speech Therapy

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