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DHARAMSHILA HOSPITAL
YOUR PARTNER IN **CANCER** CARE

DHARAMSHILA HOSPITAL AND RESEARCH CENTRE

(A unit of Dharamshila Cancer Foundation And Research Centre)
Dharamshila Marg, Vasundhara Enclave, Delhi - 110 096 **T** +91-11-43066666, 22618675
F +91-11-22617770 **E** contact@dhrc.in **W** www.dhrc.in
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If Undelivered Please Return to:
Dharamshila Hospital And Research Centre
Dharamshila Marg, Vasundhara Enclave, Delhi 110096

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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DHARAMSHILA HOSPITAL
YOUR PARTNER IN CANCER CARE

DHARAMSHILA 23 years Adding quality to life

Dear Friend,

Nursing services are back bone of the hospital. DHRC celebrated "Nurses Day" on 10th May 2014 pledging commitment to excellence in patient care.

Dharamshila BMT Centre is now fully established. Three successful Haploidentical BMT and three Autologus transplants were performed in the last two months raising bar by providing excellent care. Our BMT Centre is having world class Infrastructure and experienced team of Consultants, Dr. Suparno Chakarbarti and Dr. Sarita Jaiswal who are ensuring high cure rates. Dharamshila BMT Centre is one of its kind facility having unique air conditioning design to achieve 100% sterility, anteroom for scrubbing before entering BMT Room, stainless steel doors and vinyl covering on floors and walls. It is satisfying to note that good no. of patients from within the country and aboard have been registered for treatment. We are pleased to say that we are the only BMT Centre providing a comprehensive program for Haploidentical or half matched family donor BMT for those patients lacking a matched family donor.

DHRC is going to conduct BLS & ACLS workshop (AHA Certified) on 25th, 26th & 27th July 2014. The detailed information is on the hospital website (www.dhrc.in).

As a part of our academic initiative Dharamshila Cancer Congress (South Delhi Chapter) took place in which our team of cancer specialists including Medical Oncologist, Radiation Oncologist, Surgical Oncologist and Blood & Marrow Transplant team shared their view points about latest cancer treatment modalities. More than 150 medical practitioners participated in Dharamshila Cancer Congress and there was good interaction. DHRC will organise Dharamshila Cancer Congress Chapters in neighbouring cities for spreading awareness about latest treatment for cancer care.

DHRC has opened "Platinum Floor" having state of the art VIP suits and Super Deluxe, Deluxe & Single category of rooms to provide world class infrastructure to our patients. The five star ambiance and facilities will further add to our quality care.

Dr. Sandeep Chatrath
Chief Executive Officer

BASIC LIFE SUPPORT (BLS) AND ADVANCED CARDIAC LIFE SUPPORT PROVIDER (ACLS) COURSE
(American Heart Association Certified)

25th, 26th and 27th July 2014

This course will be conducted by the AHA Certified ACLS Instructors from Dharamshila Hospital And Research Centre, Nodal Centre of prestigious Medical Institute Maulana Azad Medical College, Delhi.

COURSE DETAILS

Dates	Timings	Course	Fees	No. of Seats
25th July 2014	8:00 A.M. – 6:00 P.M.	BLS	Rs. 2,500/-	12
25th, 26th and 27th July 2014	8:00 A.M. – 6:00 P.M.	ACLS	Rs. 7,000/-	24

Venue : Conference Hall, Dharamshila Hospital And Research Centre, Near New Ashok Nagar Metro Station, Delhi - 110096

Last Date of Registration – 15th July 2014 (Spot Registration is not available)

For more details and to download the registration form, kindly visit our website www.dhrc.in or contact Dr. Neha Agrawal : +91-9818415651 and 011-43066153

POLYPOSIS COLI - A PREMALIGNANT CONDITION

Introduction

Polyposis coli or Familial Adenomatous polyposis (FAP) is an inherited disorder characterized by hundreds of polyps in the bowel. This inherited condition shows autosomal dominant inheritance with high degree of penetrance. If left untreated one or more carcinomas will develop in the large bowel in nearly every instance, often before the age of 40 years. We present a case of Polyposis coli in a middle aged man.

DHARAMSHILA HOSPITAL AND RESEARCH CENTRE
Dharamshila Marg, Vasundhara Enclave, Delhi - 110 096

Case history

A forty-nine year old male presented to our hospital with black stools for five days and a history of loose motions associated with weakness for one year. He did not have a history of rectal bleeding prior to this episode. There was no family history of cancer or any other systemic disease. Patient was a non-smoker and did not consume alcohol. General physical examination showed no significant findings except pallor. On per- abdomen examination, no abnormality was found whereas on per-rectal examination multiple polyps were felt 3 cm above the anal verge.

On investigations he was found to be anaemic (Hb-7.5 g/dl). Ultrasound and CT of the abdomen were normal. Upper gastrointestinal endoscopy showed a lax oesophageal sphincter and gastric biopsy done was reported to have non-specific chronic inflammation. Colonoscopy revealed multiple polyps in the entire colon suggestive of polyposis coli (Fig I). Biopsy from one of the polyps showed Adenomatous polyp with moderate dysplasia.

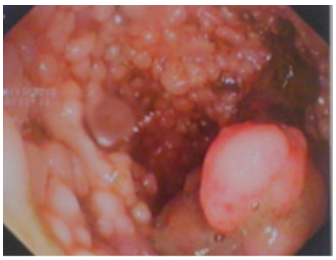

Figure 1: Multiple polyps seen on colonoscopy

Management

The case was discussed in the multidisciplinary tumor board of the hospital and a plan for total colectomy and ileorectal anastomosis with surveillance endoscopic polypectomy of remnant rectum, was advised.

At laparotomy, bowel loops were dilated and sigmoid colon showed one indurated area measuring 4x4 cm. A few mesentric lymphnodes were found. Intraoperative colonoscopy by the gastroenterologist revealed the whole colon and rectum full of varying sized polyps, extending till the anal verge. Colon was mobilized, colic vessels ligated, rectum dissected (leaving 3 cm of rectum as stump) and 10 cm of ileum was resected and the specimen removed. Single layered ileorectal anastomosis was done and complete haemostasis achieved. Post-operative recovery was satisfactory and patient was discharged on eighth day in a stable condition.

Histopathology

Gross examination of the colectomy specimen included 107 cm long colon, ileocolic junction and 8 cm of ileum with unremarkable appendix. The colonic mucosa was studded by numerous sessile and pedunculated polyps, extending from cecum to distal resected margin (Fig II).The largest polyp measured 3x2.2x1.8cm. A thickened area with ulceration measuring 3x2.6cm was seen 19cm from distal margin which on cut section showed a grey-white tumor infiltrating the bowel wall. Histopathology showed a well-differentiated Adenocarcinoma infiltrating the muscle coat (Fig III) and the pericolic tissue with metastasis in two out of thirty- four pericolic lymphnodes (02/34) dissected from the specimen. Remaining colon had multiple villous adenomas with moderate to severe dysplasia. A diagnosis of well differentiated adenocarcinoma with multiple villous adenomas (Pathological stage pT3 pN1b) was made.

Figure 2 : Colectomy specimen showing colon studded by polyps of varying sizes

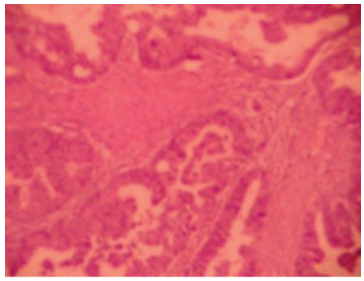

Figure 3 : Microphotograph showing a focus of well-differentiated Adenocarcinoma infiltrating the bowel wall

Discussion

Polyposis coli or FAP is a rare familial colorectal cancer syndrome characterized by striking phenotype in colon i.e. multifocal colorectal cancer in a background of thousands of adenomatous polyps. It is transmitted as autosomal dominant trait .It is now recognized that FAP phenotype is diverse and the number of colonic polyps can vary markedly. Accordingly, classical FAP is now diagnosed when an individual develops at least 100 adenomatous polyps during lifetime, while attenuated FAP (AFAP) is a term applied to a patient whose lifetime polyp burden is in the range of 20 to 100 polyps. The disorder (both FAP and AFAP) is caused by germline mutations in APC (adenomatous polyposis coli) gene, which is a tumor suppressor gene. Germline APC mutations are carried by 1/10,000 to 1/5000 individuals, most inherited from similarly affected parent but 20 to 30% are de-novo mutations and our patient belonged to this category.

The colonic polyps generally appear after puberty and are evident by age 25. If polyposis is not treated surgically colorectal cancer will develop in almost all patients before age 40. Polyposis coli results from defect in the colonic mucosa, leading to an abnormal proliferative pattern and impaired DNA repair mechanism. To facilitate early diagnosis screening sigmoidoscopies should be started at age of ten years in families with history of FAP. Once multiple polyps are detected patient should undergo prophylactic total colectomy. For AFAP screening may begin later in the teens, and colectomy is performed when polyp burden is no longer manageable by polypectomy. NSAIDS such as Sulindac and Cyclooxygenase inhibitors like Celecoxib can decrease the number and size of polyps temporarily. NSAIDS are not proven to reduce the risk of cancer. Upper gastrointestinal surveillance is also indicated since gastric and small bowel polyps can develop, especially in the periampullary region, where there is 5 to 12 % risk of progression to cancer in FAP.

Polyposis coli is the most common cause of hereditary colorectal cancer. At least 100 polps are necessary for diagnosis of classic FAP. Except for their remarkable numbers these growths are morphologically indistinguishable from sporadic adenomas. Colorectal adenocarcinomas develop in untreated FAP patients sometimes even before 30 years age. Colectomy remains the primary modality for therapy and prevention. Colectomy prevents colorectal cancer but patients remain at risk of neoplasia at other sites in gastrointestinal tract particularly adjacent to ampulla of Vater and stomach.

Early recognition of these conditions is not only vital for management in affected individuals, but also for prevention and early detection in at-risk relatives. Molecular techniques can be used for the pre-symptomatic diagnosis of this disorder through demonstration of germ line mutations in the relevant genes.

Department of Pathology - Dr. Sumedha Kotwal, Dr. Sanjay Deb, Dr. R. Dawar

Department of Surgical Oncology - Dr. Anshuman Kumar

TYPICAL CARCINOID OF LUNG – A CASE REPORT

Pulmonary carcinoids are rare neoplasms, accounting for 2–5% of all lung tumors, with an approximate annual incidence of 2.3–2.8 cases per million of the population. The classification in use (WHO 1999) makes a distinction between typical (TC) and atypical carcinoids(AC). In 10–15% of cases the tumor can present with regional lymph nodal metastases, and that is why they may be classified as malignant neoplasms, even if with a low grade. Distant metastases occur in 15% of cases, and are typically located in the liver, bone, adrenal gland and brain. At present, surgery is the gold standard for treatment of this tumor, with a different approach between typical carcinoids, in which a parenchyma-sparing resection is preferred and atypical carcinoids, in which a limited resection should be obviated. Almost half of the patients do not have any symptoms and diagnosis is therefore accidental. The presentation symptoms most frequently seen are cough (with or without expectorate), thoracic pain, hemoptysis, dyspnea and pneumonitis. Surgery currently represents the best treatment with good mid- and long-term survival benefit with an acceptable risk.

Case study :- Mrs A, a lady aged 36 years came to our institute with the history of cough without expectoration since one month. She developed pain in right chest since one week. There was no history of haemoptysis. Her chest x-ray showed mass lesion in right lower zone. CECT thorax showed well circumscribed heterogeneously enhancing mass in right lower lobe, suspicious for a neoplastic lesion. No lymphadenopathy or pleural effusion. FNAC nodule from right lung lower lobe reported as neuroendocrine tumour suggestive of carcinoid tumour. 5-Hydroxy Indole Acetic Acid (5-HIAA) assay of urine was 23.52 mg/g creatinine (reference range <10). Plasma chromogranin A (CgA) level was 295.80 ng/mL(reference range <100). Whole body Ga-68 Octreotide (DOTA NOC) PET- CECT scan with triphasic liver study showed a well circumscribed DOTA NOC avid heterogeneously enhancing soft tissue mass lesion in the basal segment of right lower lobe. There is absence of DOTA NOC avid disease elsewhere in the regions of the body surveyed. The case was discussed in the tumour board and planned for right lung lower lobectomy under general anaesthesia. Patient underwent right postero-lateral thoracotomy with right lower lung lobectomy. Histopathological examination revealed a 4.5x4.0x3.7cm tumor arising from the bronchial wall and pushing into the adjacent lung parenchyma. Microscopically there was no increase in mitotic figures or necrosis seen. Cut margins of lung tissue and bronchi are free of tumour. Tumor cells express CK, CK7, NSE, Chromogranin and Synaptophysin and do not express CK20, CDX2, TTF-1 and CEA. Ki-67 proliferative index was less than 1%. Features are compatible with a Typical Carcinoid of the lung. Postoperative period was uneventful. ICD removed on third postoperative day. Patient was discharged on fourth postoperative day in a stable condition. Patient is advised for regular 3 monthly follow up.

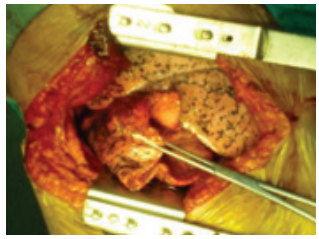

Figure 1: Right Lung lower lobectomy

Figure 2: Right lung lower specimen (formalin fixed)

Discussion :- Carcinoids are found to arise from the cells of the Diffuse Neuroendocrine System, enterochromaffin cells (glandular endocrine-hormone producing cells) widely distributed in the body but found in greatest amounts in the small intestine and then in decreasing frequency in the appendix, rectum, lung, pancreas and very rarely in the ovaries, testes, liver, bile ducts and other locations. Carcinoid tumors can produce an excess of hormone like substances, such as serotonin, bradykinin, histamine, and prostaglandins.

Excess levels of these substances can sometimes result in a diverse set of symptoms called carcinoid syndrome. Surgery, with complete removal of all of the tumor tissue, is the first and best treatment when it is possible, and if detected early can result in a complete and permanent cure. Lobectomy with or without sleeve resection of the bronchus is still the standard procedure, especially for atypical carcinoids and for central typical ones.

The surgical treatment performed most frequently is lobectomy (56%), followed by pneumonectomy (11%), wedge resection (11%) and bilobectomy(9%). The classification in use (WHO 1999) makes a distinction between typical (TC) and atypical carcinoids (AC). Typical carcinoids are slow growers. Data on survival of patients with small tumors not causing Carcinoid Syndrome and without spread, treated by surgical removal alone, indicates that a complete cure is usually possible in these cases. In those tumours that are somewhat larger and have spread to local tissues and local lymph nodes but which, along with these locally invaded tissues, are still totally removable surgically, the average survival has been 8 years with a range up to 23 years.

Octreotide is an interesting tool for diagnosis and management but surgery, however, remains the best treatment. The role of radiotherapy and chemotherapy is still debated. Both typical and atypical carcinoids, require an aggressive therapeutic approach like a primary lung cancer, prognosis is good for typical, although it is worse for atypical carcinoids.

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