Module no. 8
Malignancy in Elderly

Learning objectives:

By the end of the chapter, non-specialist medical officers should be able to:

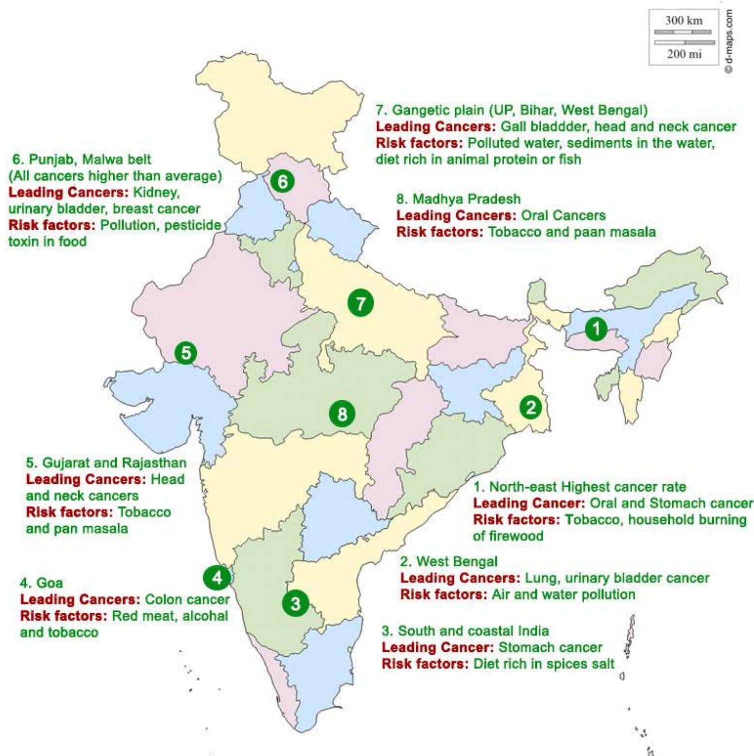
- Understand the importance of proper history taking and clinical assessment of the older person
- Recognize signs and symptoms of malignancy, undertake the basic relevant investigations and timely referral
- Able to understand where palliation and supportive care is more imoportant than a curative intent and take steps in enhancing the quality of life through relief of symptoms.

Introduction

Cancer is the leading cause of death in both developed and developing countries. Cancer and ageing have a strong link and it is seen that the incidence of cancer disproportionately affects the older adults. Approximately 60% of all newly diagnosed malignant tumors and 70% of all cancer deaths occur in persons aged ≥ 60 years .

Epidemiology of cancers in India

Geographical distribution and burden of cancers in India



Signs and symptoms of suspected malignancy:

General signs	Changes specific to certain cancers
• Continuous fever • Fatigue • Unexplained weight loss • Loss of appetite • Pain • Skin changes	• Changes in bladder and bowel habits • Non healingsores • White patches inthe mouth or on tongue • Unusual bleeding or discharge • Lump in any part of the body. • Indigestion or difficulty in swallowing • Recent change in warts or moles • Nagging cough or hoarseness of voice

Many of the general signs and symptoms like weakness,fatigue, loss of weight, joint pain etc. mimic those of the ageing process hampering early diagnosis.

Diagnosis /Approach

At a primary level, *the following needs to be done and in case of a high degree of suspicion, timely referral needs to be done*

- Clinical examination
- Basic investigations
    - Blood tests like complete blood count
    - Liver and Renal function tests
    - Fecal occult blood test (FOBT)

At a secondary/ tertiary level the following need to be done as indicated:

- Radiograph - Chest X-ray,barium meal or enema
- Imaging techniques - Utrasonography,CT /MRI/ PET scan
- Endoscopy – Upper/ lower Gasrointestinal, Urinary bladder, lungs, larynx
- FNAC or biopsy of lump/tumor
- Mammography for breast lumps
- Pap smears for gynaecological malignancies

Management

Care protocol in the elderly have to be individualized depending on various factors like age, life expectancy, stage of malignancy,co morbidities and general condition of the patients.

- Standard Therapy - Surgery, Chemotherapy, Radiotherapy
- Adjuvant therapy - Targeted therapy, Hormonal therapy
- Palliative/ supportive/ End of life care

Specific Malignancies

Oro pharyngeal cancer

Risk Factors	Presentation
- Tobacco use (different forms) - Alcohol consumption - Human papilloma virus (HPV) infection - Viral infection including - Hepatitis C virus (HCV), - Human immunodeficiency virus (HIV - Betel nut /quid chewing - Occupational exposure /radiation - Diet and genetic predisposition	- A sore or lesion in the mouth that does not heal within two weeks. - A lump or thickening in the cheek - A white or red patch on the gums, tongue, tonsil, or lining of the mouth - A sore throat or a feeling that something is caught in the throat. - Difficulty chewing , swallowing or moving jaw /tongue - Numbness of the tongue or other area of the mouth. - Swelling of the jaw that causes dentures to fit poorly - Chronic hoarseness

Management:
At the primary level, routine screening needs to be done in high risk individuals (Above 60 years, chronic betel quid user/smoker, having premalignant lesion like leukoplakia/ white spots on tongue or oral mucosa/ mucosal non healing ulcer.

Secondary/ Tertiary level:

- FNAC/ Tissue biopsy
- Tolonium chloride or toluidine blue dye
- Oral CDx brush biopsy kits
- Salivary diagnostics
- Optical imaging systems
- CT Scan/ PET scan

Gastrointestinal (GI) Cancers

Gastrointestinal cancer may be divided into:
i) Cancers of the upper GI Tract - Esophagus, Stomach, Pancreas, Liver, Gall bladder
ii) Cancers of the lower GI Tract - Colorectal, Anal, Carcinoid tumors

Risk factors	Presentation
- Diet **-** Salt rich, smoked or poorly preserved foods, - nitrates and nitrites have been associated - Helicobacter pylori infection - Alcohol and tobacco use	***Esophageal Cancer*** Symptoms are inability to swallow food and pain with general debilitating signs and symptoms. ***Pancreatic cancer*** When a tumor is advanced, severe pain in the upper abdomen, possibly radiating to the back, jaundice. ***Hepatocellular cancer*** Jaundice, pruritus, ascites or enlarged abdominal mass ***Gall bladder*** Jaundice, and pain in the upper right quadrant of abdomen, associated gallstones. ***Colorectal cancer*** Bleeding per anum, abdominal pain, constant feeling of fullness of bowels or altered bowel habits

Management:

At a primary level, fecal occult blood should raise a strong suspicion og GI malignancy.

At a secondary/ tertiary level, the following are done:

- Fecal Occult blood test (FOBT)
- GI Endoscopy – upper/lower
- Imaging studies like ultrasonography, CT and PET scan
- Serum Carcino-embryogenic antigen (CEA)

Preventive measures at a primary level include promotion of diets high in raw vegetables, fresh fruits (containing vitamin C, antioxidants), alcohol and tobacco cessation.

Treatment modalities include surgery and radiotheraphy/ chemotherapy depending on the type and stage of the cancer.

Lung Cancer

Risk Factors	Presentation
- Smoking - Occupational exposure (Asbestos, Silica, Coal, Radon, Beryllium, Strontium, air pollutants) - Family history - History of previous lung cancer	- A new cough that doesn't go away - Changes in a chronic cough or "smoker's cough” - Hemoptysis - Shortness of breath, Chest pain - Wheezing, Hoarseness - Unexplained loss of weight - Bone pain - Clubbing, Anemia

Management:

At a primary level, history and basic investigations such as chest x-ray may be done.

At secondary/ tertiary level:

- Sputum cytology
- Fiber-optic bronchoscopy(FOB) -Percutaneous fine-needle aspiration cytology (FNAC)
- CT scan/ PET chest and for metastasis abdomen
- Chemotherapy/ radiotherapy are done depending upon stage/ type of cancer. Surgery maybe done in selected cases.

Breast Cancer

Risk factors	Presentation
- White race - Family history of breast cancer (especially in a first-degree relative) - Early menarche or late menopause . - No pregnancy or late first pregnancy (older than 30 years) - History of benign breast disease (hyperplasia or atypical hyperplasia) - Obesity/moderate -excessive alcohol use - Long term use of OC pills or postmenopausal estrogen replacement therapy	- A lump in the breast - Bloody discharge from the nipple - Retraction of the nipple - A change in size / contour of the breast - Flattening, redness or pitting of skin

Management:

At a primary level, physical breast examination annually is important for screening. Advocacy and awareness regarding self breast examination is important.

At Secondary/ Tertiary level:

- Mammography - at intervals of 1-2 years
- Fine needle/ Core Needle aspiration/ excision biopsy

Treatment includes surgery with chemothaerpy/ radiotherapy/ hormonal therapy depending on type and stage of cancer.

Female reproductive tract cancers

Risk factors	Presentation
Uterine Cancer -Drugs like Tamoxifen/ oestrogen -Obesity -Hypertension **Cervical Cancer** Human Papilloma Virus(HPV) infection- HPV-16 and 18 are the 2 most common high-risk types Early onset of sexual activity/multiple sexual partners Cigarette smoking Low socioeconomic status -Use of OC pills - Immunosuppression	- Post-menopausal vaginal bleeding or spotting, Postcoital bleeding - Pelvic pain. - Abnormal white or watery vaginal discharge - Dyspareunia

Management:

At a primary level:

- Per vaginal and per speculum examination
- Visual inspection with acetic acid (VIA)

Secondary/ Tertiary level:

- Papanicolaou (Pap) smear
- Liquid-based cytology (LBC)
- Colposcopy and biopsy
- Ultrasonography – Transvaginal, CT scan/ PET scan
- Treatment modalities include surgery. Chemotherpy and radiotherapy depending on the type and stage of cancer.

Prostate Cancer

Risk Factors	Presentation
Family history factors -Others - Hormones, prostatic inflammation, sexually transmitted diseases	-Nocturia, Hesitancy or increased frequency -Dysuria -Bony pain due to metastases

Management:

At a primary level, per rectal examination should be done in case of suspected disease.

At secondary/ tertiary level:

- Prostate Specific Antigen (PSA) estimation – Non specific, as this maybe elevated in other prostatic conditions
- Ultrasonography – transrectal, CT scan, PET scan

Key messages:

- Cancers of all types are on the rise
- Early detection and referral of suspected malignancy is key for better treatment and prognosis.
- Prevention through advocacy and increased awareness on issues such as tobacco cessation, self breast examination, and early reporting of any suspicious symptoms is vital at a primary level.
- Reassurance and good communication both with the patient and the family on the need for treatment and possibility of cure needs to be emphasized as prognosis and survival has improved with increased range of treatment modalities.
- Assessment of functional status and quality of life and depression is essential with necessary remedial measures.

References for further reading

1.Davidsons Principles and Practice of Medicine 23rd edition

Practice Exercises

Practice-1

A 68 year old male presents with complaints of difficulty with urination. He describes a weak stream and a sense of incomplete voiding. He describes nocturia (5 episodes per night) and has been taking an alpha-blocker for this with minimal improvement. He says he can last about 60 to 90 minutes without urinating. He denies any suprapubic tenderness, dysuria, or hematuria. He further denies any back pain or gastrointestinal complaints. Rectal examination reveals his prostate to be approximately 60 mL, asymmetrical with a large 2-cm nodule at the right base.

i) What is your Provisional diagnosis ?
ii) What will be your preliminary investigation of choice?
iii) Delineate the steps in reaching the diagnosis and forming a management protocol.

Practice-2

A 70-year-old male presents to his primary care physician with a complaint of rectal bleeding. He describes blood mixed in with the stool, which is associated with a change in his normal bowel habit such that he is going more frequently than normal. He has also experienced some crampy left-sided abdominal pain and weight loss. He has previously been fit and well and there was no family history of GI disease. Examination of his abdomen and digital rectal examination are normal.
i)What will be the first investigation that you will ask for and why?
ii) Is there a specific Lab test that you will ask for?

Practice -3

A 68 year old female from rural part of India presented with a 2 months duration H/o left sides chest pain radiating to the back and 3 bouts of hemoptysis. She also complains of fatigue and loss of appetite. There is also H/O considerable loss of weight. She does not give a h/o tobacco smoking in any form.
i)What are the step wise method of diagnosis in this patient?
ii) Is the negative H/O smoking relevant?

Practice-4

Name the screening methods for carcinoma cervix best suited for the primary level.

Practice 5:

How would you teach a group of rural women the steps of Breast Self Examination?

Practice 6:

Per rectal examination using a mannequin