

Project Report on "CANCER"

INTRODUCTION of CANCER

This is Project Report/Essay - Cancer. Among disease, Cancer ranks high as a major killer being responsible in recent years. Cancer is estimated that about one million people in United States receives treatment for some kind of Cancer each year. Of these, more than half are new cases, having been diagnosed for the first time during the year. If present trends continue, about one fourth of the nation's citizen's will sooner or later develop cancer.

These are several kinds cancer all of them malignant tumors. A tumor is a swelling or mass resulting from abnormal growth of tissue. Cancer is likely to damage important or vital organs or tissue in any or all part of the body. Causing serious disease and often death.

OBSERVATION :-

Now a days, lot of people suffer from unavoidable disease known as cancer.

PROBLEM :-

Cancer still tolls huge numbers of lives. In spite of effective treatment, basic understanding of the causes and factors responsible for cancer.

HYPOTHESIS :-

1. Cancer remain unidentified in initial stage.
2. Carcinogens induces cancer which are present in environment due to pollution.

3. Normal genes of body become defective and cause cancer.

4. Lack of awareness in public to identify the cancer.

The cancer is an incurable disease but it can be treated by combination of surgery, drugs and radiation therapy.

TYPES OF CANCER

Some important type of Cancer are :-

1. Leukemia : Cancer of blood in which white blood cells show an abnormal increase.

2. Carcinomas : Cancer of epithelial cells.

3. Sarcomas : Cancer of connective tissue.

4. Lymphomas : Cancer of lymphatic tissue.

5. Lipomas : Cancer of adipose tissue.

CHARACTERISTIC OF CANCER CELLS

A few important characteristic of Cancer Cells are given below :

1. Cancer cell cultures are immortal and can grow indefinitely.

2. Cancer cell do not show contact inhibition.

3. Cancer Cells lack intracellular adhesion.

4. Cancer Cells does not depend upon anchorage.

5. In cancer cells molecular changes in all membrane components (glycolipids and glycoprotein) have been found.

6. Tuberous cells consume much more glucose than normal cell because they have to grow and multiply.

CAUSES OF CANCER

The cause of cancer are not fully understood. However it is known that some chemicals are carcinogenic or cancer causing. Some causes of cancer are given below :

1. Certain chemicals found in cigarette and smoke, asbestoses, nickel and certain dyes, to mention only a few of the many substances implicated in the induction of cancer.

2. Heredity has a definite influence on the occurrence of cancer in human being.

3. Exposure of ultraviolet rays also cause cancer.

4. X-Rays can also induce cancer.

5. Tobacco chewing is also the main cause of the oral cancer.

6. Syphilis of the tongue, jagged teeth often precedes cancer of the tongue.

There must be still other factors in the causing of cancer. We should lookout for any condition likely to cause cancer or for the earliest signs of what may be developing cancer.

CANCER SYMPTOMS

1. Any persistent lump or thickening in tissue, especially in the lip and tongue or breast.

2. Unexplained lose of weight.

3. Difficulty in swallowing.
4. Persistent cough or hoarseness.
5. A change in digestive habits.
6. Loss of blood through natural orifice or excess out of date loss of blood in women.
7. Change in colour of infected areas (like male wart)
8. A swelling or sore throat that does not heal easily.

CARCINOGENS

Carcinogen → Target Tissue

1. Coultter (3, 4 benzopirene) → Skin, Lungs
2. Cadmium Oxide → □ Prostrate glands
3. Afiotoxin (a mould metabolite) → Liver
4. Mustard gas → Lungs
5. Nickel and Chromium → Lungs
6. 2-Naphthylamine and 4- aminobiphynle → Urinary bladder
7. Cigarette Smoke → Lungs

Location for Cancer

Cancer occurring in any one part of body has unique characteristic. Now there is a list in alphabetical order the various parts of body in which cancer commonly occurs.

1. Bile Ducts :

The bile ducts may become involved either with cancer developing within the ducts themselves or with cancer in adjacent structures. The earlier significant symptom in Jaundice, which results from continuous obstruction to flow of bile.

2. Breast :

The breast is the common site of cancer in women lumps in the breasts is caused by cancer. So the physician is dealing with early case of lump in the breast, has to differentiate between benign tumour and malignant one.

3. Bone :

The cancer of bone grows due to blood streams or from some adjacent organ or tissues. Bone cancer causes pain swelling and weaken the bone.

4. Esophagus :

Cancer of Esophagus is also common it may occur in any part of organ from the throat on down, but mostly in the lower part. Due to cancer of Esophagus, there is difficulty in the swallowing.

5. Lung :

The cancer of lungs is becoming more prominent in our country which causes maximum death in our country. The main reason for the lung cancer is cigarette without treatment the survival rate for the usual type of lung cancer is zero. In the total type of cancer 40% are infected by the lung cancer.

The reason for the high mortality rate :

1. It is highly malignant.
2. It causes no distinctive early symptoms.

6. Ovary :

This is the most dreadful cancer amongst the women. The most of the women die due to cancer of ovary in our country. This can be treated by surgery.

7. Pancreas :

The cancer of pancreas causes the pain in the upper part of the membrane. Cancer of pancreas also causes Jaundice. The cancer is highly malignant cancer of pancreas is more common in men than women. This can be removed by surgery.

8. Stomach :

Cancer of stomach is also more common in men than women. Symptoms are indigestion, loss of appetite, loss of weight etc. Surgical removal without delay of all or part of the stomach is only proper treatment.

9. Thyroid :

This cancer causes the enlargement of thyroid gland, development of nodules in the gland. The removal of these nodules is very necessary for the treatment of this disease.

10. Tongue :

Cancer of tongue cause more death than any other cancer within the mouth. It results persistent inflammation.

CURE AND TREATMENT OF CANCER

Diagnosis :

Biopsy of tissue, endoscopy (Gastro scope for stomach), X-Rays ultrasound are important tests.

Antcarcinogens :

They are the substances which prevent the action of carcinogens. Antcarcinogens occur in green yellow vegetables, fruits, milk. They are riboflavin (milk), flavonoids (green-yellow vegetables and fruits), Vitamin C, indoles (Cabbage) etc. B-carotene present in green yellow vegetables is promoter-inhibitor which weakens the action of cancer promoters.

Treatment of Cancer: The most common types of treatment are:

Surgery

Surgically removes as much of the cancer as possible.

Chemotherapy

Uses medications that are toxic to cells to kill rapidly-dividing cancer cells.

Radiation Therapy

Uses powerful, focused beams of radiation inside (brachytherapy) or outside (external beam radiation) your body to kill cancer cells.

Stem Cell (Bone Marrow) Transplant

Repairs diseased bone marrow with healthy stem cells. Stem cells are undifferentiated cells that can have a variety of functions. These transplants allow doctors to use higher doses of chemotherapy to treat the cancer.

Immunotherapy (Biological Therapy)

Uses antibodies to help your body's immune system recognize cancer so it can fight it off

Hormone Therapy

Removes or blocks hormones that fuel certain cancers to stop cancer cells from growing.

Targeted Drug Therapy

Uses drugs to interfere with certain molecules that help cancer cells grow and survive.

Surgery, Bone marrow grafting (for leukemia), radiotherapy (exposure to radio isotopes), hormonal therapy, chemo therapy (use of chemicals) drugs which are more toxic to cancer cells than normal cells. Two drugs (Vincristin and Vinblastin) from catharanthus roseus (Vinca-rosea) are effective in controlling leukemia. Taxol is anticancer drug obtained from Taxus baccata.

CONCLUSION

Cancer disease is incurable, but timely action can cure this disease to some extent. X-Rays and Radium have proved to be valuable aid to surgery in the treatment of many cases. They provide the only useful treatment for cancer of lymph node tissues, for cancers too extended to the curable irritation also helps to cause the cancer tissue to shrink and give relief.

We feel that we must consult an experienced physician for a through examination and advice if any suspicious sign or symptoms is observed. Delay can cause the death of a person. Therefore such delay is very dangerous.

Bibliography

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