CANCER IMMUNOLOGY*

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Cancer is a problem, by the time the patient comes to visit us, it has already advanced. The earlier diagnosis of Cancer before it becomes clinically detectable, could be made possible only in the pre-cancerous stage by tests like Capillary Dynamic and Copper Chloride Crystallization tests evolved in Lucas Cancer Clinic, Arlesheim, Switzerland. Through these methods, diagnosis can be made 15-20 years before cancer becomes clinically detectable. Through the formations and configurations on the copper chloride plate and the filter paper, we can diagnose the propensity to cancer.

One out of every five patients dies of cancer. The third major cause of death is cancer apart from coronary heart disease and accidents. For the last 20-25 years, major attention is given to immunology which holds the key to the prevention and cure of Cancer. Immunotherapy stands fourth in the rank of therapies after surgery, radio-therapy and chemotherapy. Classical example of immunotherapy is *bone marrow transfusion* in Leukemias. Now as far as Homoeopathy is concerned, where lies the position of cancer. As you know disease in general is the disturbance of the vital force, and there is disturbance in the cell susceptibility and immunity which are basic to all life, and the fundamental concepts of biology. Susceptibility and immunity are the reverse sides of the same coin; and, a tremendous work exists in the field of immunology of tumours. There are various books and tremendous work has been done, where immunotherapeutic approach to the treatment as well as to the investigation of Cancer has been carried on.

Basically, Cancer is genetic and inherited in origin. The primary disturbance is at the immunity level. The secondary disturbance is due to the environmental carcinogens which may be physical, chemical, biological, parasitic and psychological. Quite a number of examples I have had in practice, where development of a galloping cancer after an acute psychological trauma have been seen.

Now what is the evidence that immunity plays a vital role in the genesis of cancer?

There have been reported, in literature, about 150 cases by Everson and Cole of spontaneous regression of tumours; that means, body immunity has taken care of these tumours. The presumption is that before Cancer is localized in organs and detectable clinically, malignant cells are already circulating in the peripheral blood before it localises, and the immune mechanism is able to deal with these circulating malignant cells in the peripheral blood. In the course of tumour, if a patient develops some bacterial infection, not viral, like erysipelas or pneumonia or after artificially-induced hyperthermia, it has been found that there is regression of the tumour, and it has been observed that inflammation and tumour are the two polar anti-thesis according to Rudolph Steiner. Under Iscador particularly in the treatment of the tumours of breast and certain abdominal tumours, the tumours get converted into a sterile abscess and it can be evacuated by the knife and after the abscess is evacuated, the tumour gets arrested. Now, if metastasis is present in a case, surgery is not contraindicated as this has been observed that with the removal of primary tumour, metastasis also regressed. In histopathological examination, in cases of benign hypertrophy of prostate gland and benign goitre, in about 30% cases cancerous rests and nests have been detected. About 3000 chemical carcinogens can lead to formation of Cancer. But cancer cannot develop in a person who does not have *Cancer genome* (a particular type of a geno-type), even if he exposes himself to any number of chemical carcinogens. There have been cases reported of tumours, recurring after years of apparent cure.

All this therefore shows that Cancer is the result out of two factors: the inherent susceptibility plus environmental carcinogens which are infinite in number.

Every tumour acts as an antigen (called primary antigen load) and the body cellular mechanism,

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cell-mediated immunity, tries to seek the interior and to neutralize and destroy it through lysis or dissolving cancerous cells by producing antibodies. It is said particularly in Anthroposophical circles, that if a child is allowed to go through normal viral infections in childhood without chemotherapy or antibiotics, he is less likely to develop cancer in adult life, later whereas, if vigorous treatment of viral diseases is done in childhood, then there is proneness to develop Cancer in adult life.

Therapeutic Methods

1. **Radiotherapy**—They attack the tumour cells but as no specific technique is available which localises projection of the radio-waves to tumour-cells only, so it also attacks the surrounding healthy tissues. Thus 9 out of 10 cases come down with terrible side-effects e.g. neutropoenia, leucopoenia, pancytopoenia and anaemia, and immunosuppression or depression.
2. **Chemotherapy**—also has its side effect, most important is depression of bone marrow, leading to agranulocytosis and pancytopoenia. These drugs itself are carcinogenic and produce a teratogenic disturbance. They cause mutation of the cells and produce malignancy they activate the latent virus. Both Chemo and radiotherapy make the patients more vulnerable to metastasis by suppressing the immune system. Chemotherapy also produces delayed side-effects though minor e.g. loss of hair. Patient taking Chemotherapy always complain that he is washed out, as by suppressing immunity mechanism, it makes the patient vulnerable to external bacterial environment, the so-called *"opportunistic infections"*.
3. **Surgery**—The rationale of surgery is the inability of immune apparatus to deal with the massive tumour antigen, load and exhaustion of the immune system. Another reason to use surgery is for punch or aspiration biopsy to diagnose the case. But there is a danger that during surgery, one transmits tumour cells in areas where they were not present earlier inadvertently.

   After the resection of tumour, the immune system is able to deal adequately with the remaining rests and nests in the body. That is why, now-a-days, modified radical mastectomy is done along with axillary clearance; and, in some cases, only lumpectomy is done.

4. **Immunotherapy**—This method of treatment is still in its infancy, and is very costly. Certain substances, which are intermediate products in the formation of tumour, like *Interferon* has its place in the therapy of cancer but now it is not used any more.

Therapeutic dilemma in cancer-therapy is that the agents used for treatment, either suppress or depress the immune system and susceptibility, which is the cause for the genesis of Cancer. The most important suppressors are steroids and immuno-suppressive agents given to persons after organ-transplantation.

So, is there a way by which we can destroy the tumour cells without destroying the immunity? For this there are only two therapeutic approaches. One is *Homoeopathic Similimum* and the other is *Iscador Therapy,* both of which act at immune level. They built up the immunity. They build up the formative forces of life energy and at the same time have got some action, though relatively less, on the tumour growth inhibition and regression of tumour.

During treatment we have to consider three factors:-

1. Host
2. Tumour
3. The environment

The environment, can be modified, but cannot be completely eradicated. Alongwith regulation of the environment, treat the patient with cytostatic agents like Iscador along with Homoeopathic drugs as Iscador acts better along with Homoeopathic drugs.

In cases of localised tumours, remove the tumour load by surgery, after which there is a greater scope for Iscador and Homoeopathy. Even if the Iscador is given pre-operatively and/or post-operatively and continued for years, the patient can go on. But, the disseminated tumours are the most difficult to treat, as they affect the immune mechanism itself e.g. Lymphomas, Hodgkin's disease, Multiple myeloma and Leukaemia.

It has been observed that Iscador acts in a better way in temperate climate than in tropical areas; so it might act in a better way along the ranges of Himalayas in North India.

Whenever there is immuno-deficiency (either genetic or acquired), there is always a susceptibility to infection or to neoplasm. Steroids, insulin-shock therapy and antibiotics, if given for a long time, lead to immuno-suppression and in such patients antigen levels are 300-700 times higher than in normal population, particularly in the case of reticular cell sarcoma. So one should not try to disturb the immune-mechanism, as infection caused as a result of such disturbance becomes resistant and is non-reactive to antibiotics.

Mode of Immune Mechanism

Every cell has cell-membrane receptors to recognise antigens and every cancer cell has antigens on its

surface. Macrophages process the antigen and stimulate lymphocytes. In some cases ß-cells are also being stimulated. Some times these cells are produced without the processing of the antigen by macrophages. One part of the T-cells get converted to T-Helper cells which co-operate with ß-cells to induce antibody production specific to the antigen which produces lysis of the antigen.

Secondary pathway is that antigen-antibody reaction takes place through complements and it leads to lysis of the antigen.

Third pathway is that tissue macrophages recognise small tumour cells, cluster around them and then destroy them. The lysed cells are ingested by macrophages and are further processed. These cells may die in situ or migrate back to peripheral circulation a factor which causes recurrences of cancer or tumour.

Sometimes these cells are not lysed and they form an antigen antibody complex. The body of the persons gets sensitized to its own complex, thus resulting in pathogenesis of illnesses termed as *Auto-Immune disorders.*

Cellular Components of Cell-Mediated Immunity

The Thymus is the main organ which regulates CMI, particularly in infants and intra-uterine life. Thymus has been assigned Central Zone in modern immunology. This gland secretes certain hormones known as THYMOSIN or THYMOPOETIN which regulates the cellular maturation in peripheral lymphoid tissues.

1. **T-Cells**—These are derived from the bone-marrow and are known as stem cells. During the process of CMI, sensitized T-Cells elaborate lymphokines which can be called natural drugs. These have different subjects:
   a) *T-Helper Cells*—These cells co-operate with ß-cells producing antibodies.
   b) *T-suppressor cells* regulate the immune–system and keep it away from attacking the body's own tissues.
   c) *T-killer cells*
   d) *T-effector cells.*
2. **ß-cells**—These cells are derived from organelles in the gut and are transformed into plasma cells.
3. **K-cells or lymphocytes**—These are mononuclear cells capable of laying antibody coated cells in the absence of complement.
4. **Monocytes**—They are circulating mononuclear phagocytes of the peripheral blood.
5. **Macrophages**—These cells are present in lymph nodes, bone marrow, spleen and liver cells.

The body has got all this mechanism built into it from birth and there is a complex interaction between the antigen and these cells as they immediately go to detect these cells. Cancer results from non-detection of the *"non-self"*.

The absence of general response to antigens that previously elicited a cell mediated response is termed *ANERGY* which can be natural or acquired.

Immunological reactions like immunological tolerance, immunological enhancement, immunological deviations, take place in certain situations where body is not able to cope with the antigen and predisposes the body to development of malignancy.

Oncofetal antigens are products of gene expression during foetal tissue differentiation. When full tissue specialization and organisation are reached, these genes are normally suppressed and remain inoperative in adult life. With neoplastic transformation of a cell, there may be a re-activation of genomes and a re-appearance of embryonic antigens. Detection of these embryonic antigens in the blood of a Cancer patient gives a clue for diagnosis, e.g. in case of primary liver carcinoma a foetal enzyme is found in the blood of the patient known as ∝-feto protein, estimation of which gives an early index of probable hepatoma. Another antigen called CEA (Carcino-embryonic antigen) is found in cases of colo-rectal carcinoma. Certain tumours secrete hormones, estimation of which provides an index for diagnosis, e.g. VMA (Vanilly Mendalic Acid) is diagnostic of Pheochromocytoma of adrenal medulla and 17 hydroxyketo-steriod in a case of supra-renal cortical tumours.

"There aren't any rules for success that work unless you do."

Anonymous
