The searching in the chemistry, biochemistry and biology cells research to find the reasons and best relation to enhancing cancers treatments.

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Abstract

To Understand the chemistry and action of various types of cancers, it is necessary to investigate the basic biochemistry of human(reaction in vivo) as well as the mechanism that it is occurring.Acomparism betwwee the chemical reaction(in vitro) and that happens in a living organism(in vivo) ,the requirements and conditions for any chemical reaction should be design to control the reaction proceeds to products (main) and py-products(waste),and to purified and isolate them by chemical and physical methods through separation and purification processes .Also for biochemical reactions in body(metabolism , nutrients)in the body for building materials and by-products(waste) that should be excerted outlets by the anus(feces),lungs(gaes and toxins), kidney(fluids), and skins(water and salt).The mucosa cells(mucous),(goblet) play important rule to facilitate the passage of waste outlets body(constipation is a risk factor for colon cancer).

The phagocytic cells are responsible for removing the dead and drying cells have reached the end of their life.

Any defect in the function or composition of macrophages leads to a number of diseases and the most dangerous are cancers.

So in order to arrive to the best treatments, more research and studies are necessary.
Keywords:- cancers , metabolism , mucous cells , macrophages.

Introduction

1.1- The cancers.

Cancer is adisease characterized by uncontrolled growth of abnormal cells in the body.These cells can invade and destroy normal tissues and they can spreed to other parts of the body through the blood and lymph systems.
Cancer is classified into different types based on location of origin and the type of the cells affected.Carcinomas, which originate in epithelial tissues,converting the body's surfaces. Sarcoma arise in supporting tissues like bond, cartilage, and fat.leukemias develop in blood forming tissues, and lymphomas and myeloma affect the immune system[(1)].

1.2- Cancer classification-:

In two ways:by type of tissue in which Cancer orignayes(histological type) and primary site,or location in the body where the cancer first developed from a historical stand point there are hundreds of different cancers which are grouped into six major categoric. Carcinom ‹sarcoma; myeloma , leuftemia ,lymphoma and mixed types[(2)].

1.3- Causes of cancers.

It caused by genetic mutations which are changes that occur in the DNA of the body's cells and are divided into two ways.

1.3.1- Genetic mutations that a person is born with the inherited from his parents.

1.3.2- Genetic mutations that occur after birth ‹I.e are not inherited.The most important causes are exposures to chemical or toxins such as benzene, nickel and cigarette smoke[(3)].

1.4- Treatments of cancers and diseases.

Cancer treatmen depinding on the specific type and stage of the cancers,; as well as the individual pation's health and circumstances.Common treatments includes surgery, chemotherapy ,radiation therapy and answering approaches like immunotherapy.

1.4.1- Surgry- propose to remove the cancer open surgrylaparoscopy and repot-assisted surgry.

1.4.2- Chemotherapy. Uses drugs to kill cancer cell throughout the body, often given intravenously or orally.

1.4.3- Radiation therapy. Uses high energy-rays to kill cancer or strink tumors either extreemly or intervally.

1.4.4- Immunotherapy. Help the body's immune system regognize and attact of cancer cells stimulating the ommune syste. to flight disease ..

1.4.5- Target therapy. Focuses at specific genetic changes.

1.4.6- Hormone therapy. Shows at stops the growth of hormone sunsitive cancer.

1.4.7- stem cell therapy. Reactor stem cell that produce photodynamic therapy , hyperthermia and laser therapy.

1.4.8- Other treatments. Include photodynamic therapy and laser therapy[(4)].

2. Chemical reaction and py-products2 ..1 Reactants and products foundation.

The reactions and products in alchemical reaction contain the same atoms abut they are arranged during the reaction , then the atoms and molecules produced by the reaction called products The reaction and the products which are unintended substances produced alongside the main desired products The waste depending on specific reaction and application.

2.2 Separation and purification of products involves various techniques in physical or chemical properties ,common methods , distillation , filtration and chromatography , ect[5]

3.1 -Biochemical reactions and by- products.

Are c, hemical reaction that take place within living organisms , catalyzed by enzymes ،and essential for life processes like metabolism،signal transduction and cell division.These reactions involve reactions that are converted into products through a process that can by synthesis(building up complete molecules from simpler ones) or decomposition(breaking down complex molecules into simpler ones), py-products or secondary products that are created during biochemical reaction, often in addition to the main products(6).

3.2- Py- products-The waste.
The main existing parts of waste from the human body.
They are..
3.2.1- The digestive system,through which feces, is the solid waste resulting from the digestion process exits.
3.2.2 -The respiratory system(lungs ,mouth ,nose).Through which carbon dioxide is expelled , in addition to some toxins that are expelled with phlegm.
3.2.3- Skins and sweat ,a fluid that come out with water, salt and muscules resulting from the metabolic.
3.2.4- Kidneys:(urine) is excreted through them , which is a liquid containing water and muscle resulting from the process of filtering blood by kidneys[7].

4.1- Mucous definition and meanaging.

Muscus is a watery,slippery secretion resulting from the risky song.It is ajelky-tixe substance secreted by intestines to keep the living of the colon moist and lubricated.Mucus protects the living of intestine.It is made by special cells called goblet cells.It helps lubrucate food as it passes through the intestine and prevents bacteria from reaching the epithelial cell[8].

Goblet cells are specialized epithelial cells that produce mucus and are found in various mucosa membranes in the body such as the digestive and respiratory systems.mucus helps protect the mucous member ancestors from damage and inflammation and helps move microbes and foreign bodies away from body.Protection agonist pathogenesis from reaching the epithelial cells.Immune requlation:-Goblet cells participate in innat synthetic responce ، screting factors such as quinokines ,and letting that help regulate synthetic responses.Globlet cells are found in the small intestine colon, stomach and airway(alveoli).

4.2- The relation between macrophages and Goblet cells-;

There is a relationship in the intestinal system.Macrophages in moving pathogens and cellular both.Goblet cells produce and secrete mucus to act as a barrier.Mucus protect intestine tissue, while macrophages remove pathogen[9].

4.3- Components of mucus.

Mucus of a fluid that is about 95% water and mucus secretion from Goblet cell and submucosal glands,(2-3%) glycoproteins ,(0.1- o.5%) proteoglycons , (0.3- 0. 5%) lipids , proteins and aminoacds[10].

5. Macrophages (scavengers).

Are cells in immune system that belong to the phaycocyte family or so called scavenger.The reside in all most all tissues of the body, for example in the small intestines liver ,brain and skin[11]. Macrophages are immune cells belonging to the mononuclear phayticyte system.They play crucial roles in immune defense surveillance and homeostasis,this play review systematically discusses the types of hematopoietic Progenition that give rise macrophages including primitive hematopoietic progenitor, pry- hro-mycloid

progenitor , hematopoietic stem cells.These progenitors have distinct genetic

backgraunds and development processes.

Macrophages: monocytes are a type leukocyte type of white blood cell in the immune system.

Tissue macrophages : origin , hetrogenity; biological foundations , diseases and therapeutic targets.(tables. 1-4)[12].

Discussion

The cause of most diseases is a disorder in the body's structural and defensive system against the microorganism. This results from , first adeficiencu in essential nutrients containing the basic components required for the continuity of the body's structure and vitality , this leads to illness and then immunodeficiency.Second, environmental pollution(chemical, radiation ، and biological).
To reduce the chances of diseases occurrence factors must be precisely controled.

Any defect in these two factors leads to occurrence of the disease, so that it is type and presence must be investigation; I.e an accurate diagnosis stage and then the search for the appropriate treatments(for each cases).cancers are the most dangerous diseases the diagnose and treat currently.Advanced studies must be combined between the chemisit and the physician through serious and appropriate support for institution concerns with the combuting cancer and providing research requirements to develop early detection device and find appropriate treatment for each case .My review of this topic in an attempt to follow scientific methods by refining to a summary of biological reactions and the bath of the waste and toxins excretion and the mediators for that, and perhaps we can deduse the reasons of some of them in the system of transporting waste and toxins and excretion them.

The best studies in this regard is the one presented by Fun Guan et al(.2025)

Conclusion

1.Food metabolism mechanism forreactants, enzymes and inhibitors should be optimized for all the processes of reactions in body to control the building materials and the wastes.The deficiency of any steps in metabolism lead to many diseases.

2. The products waste should be clearly find the way to excerted out the body with the deeply understand all the processes transport the waste from the body such as mucus and marcophages cells in the tissues.

3. Any defect in the structures and functions of the mucosa (goblet) cells and /or macrophages will be directly responsible for the apperance cancer(according to each it's types).

4.The most cancers associated with outlet waste colon ،kidney, urinary and skin . This give a strong indication that any defect in the composition of the tissues responsible for cousing these diseases (cancers).

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