



Review Article

CANCER –FROM THE HORIZONS OF UNANI MEDICINE

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ABSTRACT

Cancer is an abnormal growth of cells which tend to proliferate in an uncontrolled way and in some cases to metastasize.cancer is the Latin word for crab .The ancients used the word to mean malignancy because of the crab like tenacity.It is a mass of tissue formed as a result of abnormal, excessive, uncoordinated, autonomous and purposeless proliferation of cell. Hippocrates [460-377BC] coined the term karkinos for cancer of the breast.. Cancer cells in other words refuse to stop multiplying and continue to increase in number. It is the failure to stop multiplying which is the hallmark of a cancer. This they do even at the cost of other normal cells of the body which are starved to death for lack of nutrition. In Unani literature the basic cause of disease is change in akhlat with respect to their quality and quantity. When the black bile (sauda) deviates from its normal quantity and quality.

KEY WORDS:Akhlat,Sauda,Unani Literature

INTRODUCTION

The unani system is based on humoral theory. The concept of humours is originated in medicine by Hippocrates.

The concept of four arkan is widely accepted and Hippocrates(460-377 B.C). Aristotle (380-322B.C) galen (130-200A.D). avicenna and infact other follower belonging to mashayin (pedestrians) became exponent of this concept and consequently the tibb was incarcerated in the dilemma of four. The four elements i.e. fire air water and earth, contribute to the formation of things in nature and human body is made of these four fundamental elements.

Al_hawa(air)	hot and wet	dam(blood)
Al-ma(water)	cold and wet	balgham(phlegm)
Al-ardh(earth)	cold and dry	sauda(black bile)

(p.9, *alumor al tabaiyah*, S.I Ahmed)

BASIS OF BODILY TEMPERAMENT

When the different, anasir “al-insaniyah”.(human elements) undergo different types of imtizaj(chemical combination) various compounds of specific ruat e nauiyah (molecular structures) and mizaj are produced.thses compounds constitute the Akhlat Al Badan (fluid of the body –humour)(p-29, *al umoor al tabaiyah*, S.I Ahmed)

Elements	Qualities	Humours
Al-nar(fire)	hot and dry	saфра(yellow bile)

According to Ibne e sadiq akhlat are four because, they are formed by the food we eat, which is composed by four elements (p.80 tarjuma sharh kuliyat- e- nafesi.)

Definition of akhlat

Akhlat are those moist and fluid parts of the body, which are produced after transformation (of surat-e-nauyah) mohd bin mahmood al aml, sited by mohd kabiruddin, kitab al akhlat daftar-al-masih, (delhi1946,7374) and metabolism of the elements , they serve the function of nutrition, growth and repair and produced energy for the preservation of individual and his species. A right proportion and intermixture (homeostasis) of them, according to quantity and quality constitutes health, and unright proportion or imbalance (sual –mizaj) according to quantity and quality and irregular distribution leads to disease. (p.76 al umoor al tabaiyah, S.I Ahmed)

CLASSIFICATION OF AKHLAT

Various criteria have been adopted in tibb for the classification of akhlat.

- i. According to location
- ii. According to their colour
- iii. According to their usefulness
- iv. According to being, Rutubal-ula and thaniyah (primary or secondary fluids)
- v. According to their quality of being tabaiyah(normal) and ghayar tabaiyah (abnormal)

(p.82, alumur –al-tabaiyah, S.I Ahmed)

Al khilt-al-dam(Blood)

Dam (Blood) is regarded as mixture of all four kinds (according to colour) of akhlat viz, Dam, Balgham, safra, sauda but since the red colour is dominating hence,the whole mixture is called Dam(Blood), more over blood consist of all kinds of akhlat hence is called best of all(wa-afadha-al –dam) Ibne nafis.(p92 alumur-al –tabaiyah, S.I Ahmed)

Temperament: -hot and mosit

Functions: -nutrition

Functions

- i. Nutrition (taghziah al aza), it provides nutrition to the body and replacement of wear and tear attained.
- ii. It promotes growth – ib senna. (P-81 Tarjuma Sharah Kulyat e-Nafisi)(P-93 – at Umur al – tabaiyah)
- iii. It transports all materials to the tissues, acts as vehicle.
- iv. Maintains body temperature, keeps body warm.
- v. Hamil – at ruh (carrier of ruh O2).
- vi. It carries fadhilyah al-ruh (waste products, bu kharat dukhaniyah (O2).

- vii. It carries all other akhlat fadeliyah (waste products) from the tissue to the excretory organs.
- viii. Blood contains such materials (akhlat) which performs function of defence against foreign body, thus it serves tabiyat mu dabbir badan.
- ix. It produces beauty and shine in the skin (nafise) (P-94 at umur al tabaiyat)
- x. The normal blood is red in colour, without any odour, sweet in taste and in normal quality.
- xi. The normal blood produced in liver which beneficate to the body.

(P-82, Tarjuma Sarah Kulyat nafisi).

Al-Khilt al Balgham (Phlegm or while humour)
Temperament: -cold and moist

Functions: - according to Tibb Balgham is second to dam (Blood) in superiority.

- i. During starvation, it is metabolized and mobilized (from the tissues) to the blood and performs the function of blood (rbn-e-nafis).
- ii. Balgham enters into the nutrition of the organs having balghams (phlegmatic) temperament, like brain (Ibn-e-nafis).
- iii. It furnishes moistness to the organs (Nafis)
- iv. It furnishes lubrication between intracapsular parts of the joints.
- v. The mercosa or serous fluid (Balgham) is secreted from various musous and serious membrances of the body and performs divers functions i.e. luminal fluids of the gastrointestinal tract and urogenital tract.
- vi. No wishes the various parts of the eye intraocular fluids and maintains intraocular pressure.
- vii. Various digestive juices perform the function of digestion of various food stuff.
- viii. Seminal fluid is also a specialized balgham, which function in the process of reproduction.
- ix. It performs various functions in the brain and spinal cord, such as nutrition, execution and buffering action.
- x. Endolymph and perilymph of the labyrinth performs the function of hearing.
- xi. Milk being white is a balghami rutubath, which performs normal viscosity to the blood(Abu Sahal – Masihi).
- xii. It furnishes normal viscosity to the blood.(Abu Sahal – Masihi).

(Page – 110, Al-umoor al-Tabaiyah S.I. Ahmed)

Al-Khilt al Safra (yellow bile)

Temperament: -Hot and dry
Kamiyat (quantity):- 500-1000 ml daily average 700ml.
Kaifiyath (quality):- Lighter in weight
(Page – 98, Tarjuma Sharah Kulyat-e-Nafisi)

Specific gravity: - 1.010 - 1.011
1.026 – 1.040 (in gall bladder)

Taste :- bitter

Functions

- i. Safra liquefy the blood due to its hot and dry temperament, and allows the blood to enter the narrow vessels.
- ii. Nourishes to hot and dry organs. Eg: lungs (Ibn-e-Nafis)
- iii. Due to its hot and dry temperament it clears phlegm (Balgham) from the intestines.
- iv. It helps in the digestion of fats and fatty oils, with the help of pancreatic juices.
- v. It kills intestinal worms, due to the hot and dry temperament.
- vi. It acts as anti-septic (dafa-ufoonat) (Page – 97, Tarjuma – Sharah Kuliyyat-e-Nafisi)
- vii. It is a Ghasil (irrigator) as well as natural mushily (purgative).

(Page – 119, al-umoor – altabaiyah S.I. Ahmed)

Al-Khilt-al-Sauda (Melanchole) – Black bile

The position of sauda is next to safra sauda is inferior most amongst all akhlat (humours) Nafis.

Temperament: -Cold and dry (Ali-Ibn-Al-Abbas)

Functions

- i. It nourishes certain organs like bone, cartilage, tendons, etc.(page – 69, Kulliyat-umoor-e-tabaiyah, Hakeem Taskeer Ahmed)
- ii. It protects the skin from penetration of ultraviolet radiation into it. Thus it prevents the genes of the nuclear, it also gives beauty of the hair and skin.
- iii. It nourishes hair like black organs(Page – 46, usool-e-tib, Dr. Hk. M. Kamaluddin Hussain Hamdani)
- iv. Its presence in the iris and choroids, converts the eyeball into a camera like box. Moreover the iris controls the amount of light falling on the retina.(Page 132, al-umoor-al-tabaiyah, S.I. Ahmed)
- v. Appetizer (P – 102, Tarjuma – Sarah Kuliyyat Nafisi)

Father of medicine, 'Hippocrates' postulated the humoral theory. He in his book Tabiat-al-insaan (human nature) has set forth his famous doctrine that, Dam (blood), Balgham (Phlegm), Safra (yellow bile), and sauda (Black bile), a right proportion, according to quantity and quality and mixing of which (homeostasis) constitutes health and unright proportion and irregular distribution, according to quality and quantity constitutes disease.(P – 76, al-umoor-al-tabaiyah, S.I. Ahmed)

Sauda-e-ghayar Tabaie (altered sauda)

All black or brown substances produced with the result of interage (metabolism) and do not serve any normal function in the body, but are detrimental to the body.

All those substances which become malignant and produce malignancy in the body. All those substances which produce melancholic and other related psychogenic ailment are (altered sauda).(Page-133 al-umoor-al-tabaiyah, S.I. Ahmed)

We are aware of the fact that an unending chain of metabolism changes (istehalah) is going on in our body, which results in large number of compounds (akhlat). It is also a well-known fact that one kind of substance under this background it may be constructed that Dam, Balgham and safra are (altered melanchole). (page – 134, al-umoor-al-tabaiyah, S.I. Ahmed)

According to Ali-ibn-e-al-Abbas, the altered Sauda (Sauda – Ghayar Tabaic) is extremely hot, it is why it possesses the eroding and phagocytic properties like the properties of cancer (P-131 – 132, al-umoor al-tabaiyah, S.I. Ahmed).

And when any Su-al-mizaj occurs in the cells of endocrine glands, it affects the mizaj of the entire body and nearly all the cells of the body are affected. (P-50, al-umoor-al-tabaiyah, S.I. Ahmed).

Sartan (Cancer) means – crab. The characteristics of sartan (Cancer) are that it effects the adjacent tissues and scavenges/erodes them. Cancer of skin extends from the superficial to the deeper layers. Cancer of breast extends to the muscular layer of the chest. The cancerous material reaches the distant parts through blood vessels. There is rich supply of blood vessels in the cancerous growth. It is difficult to demarcate the extent of the cancerous tissue and the normal tissue. For this reason during surgery large part of the organs are dissected.

Causes of Cancer

Appropriate cause of cancer is not yet found out inspite of advancement in microbiology and microscopy. Commonly it is seen that local itching and constant irritation has influence in the cause of cancer. Therefore people with constant irritation on their lip develop cancer of lip. Similarly people who eat tobacco and beetel develop cancer in their jaws and cheeks, especially who keep betel nut or pan in their mouth and sleep off.(Page 289, Sharah Asbab, Vol-III)

The basic cause of disease is change in akhlat with respect to their quality and quantity the temperament of organs remain in equilibrium when the blood reaching towards them is in a state of equilibrium (homeostasis) with respect to quality and quantity and this is possible only when the food/diet taken is in normal condition and healthy in appropriate quantity and proper time, and the organs related with digestion and absorption of food are healthy with respect to their temperament. But, when unhealthy diet is taken in improper proportion at irregular intervals them ghair-tabaie akhlat (altered body fluids) are produced within the body and the temperament of the organs of

digestion become altered, and this results in altered body fluids production. Sometimes food is healthy and taken properly, but external factors like air, water and occupation effects the organs of metabolism and their temperament is altered and this result in production of altered akhlat. Sometimes both internal and external factors combined together and produces body fluids which are altered with respect to quantity and quality sometimes the production of altered fluids in the body is because of some (genetic defect) congenital defect in the organ of metabolism with respect to its temperament. (P – 81, *Kitab-ul-kulliyat, Ibne-Rushd*)

Causes of Cold and Dry diseases

These are caused when the black bile (sauda) deviates from its normal quantity and quality. This occurs when cold and dry materials like cold and dry food which are similar to the temperament of sauda and when the temperament of organs of metabolism changes to cold and dry or hot and dry and the external factors for example occupation, air and water influences the temperament of Akhlats and their temperament of Akhlats and change in temperament are genetic or congenital because of which leprosy like disease occurs.

When the quantity of altered black bile (ghair tabaie sauda) increases and the spleen is unable to absorb it completely because it is altered with respect to quantity and quality, and it spreads into the blood circulation and the organs start gaining nutrition from it. Because of this dangerous diseases are produced from which recovery is difficult, because the temperament of the altered humour is very different from that of the body.

The altered black bile (Sauda-ghair tabaie) with respect to quality is divided into two categories one which is formed from burning of normal sauda (Ehteraq-e-Sauda). The other which is formed from burning of altered yellow bile (Ehteraq-e-safra ghair tabaie). The cause of these two alterations is hot and dry condition in the temperament. The altered black humour formed from altered yellow bile produces uncerations in the organs. The diseases formed from this altered black bile is leprosy and cancer. (Page 89, 90 *Kitabul-Kulliyat, Ibne-Rushd*).

Madda-e-Sartan – (Cancerous material)

The material of cancer is dangerous, harmful and commonly produced from burning of sauda (Saud-e-muhtariq) black bile and sometimes from birning of safra (yellow bile) and impure phlegm (balgham). The causative material of cancer has more heat in it, therefore it progresses faster – (Samar Qandi).

Symptoms: the symptom of cancer is that initially when it begins the growth is almond like in size or much smaller than almond and gradually it increases in size, its hardness increases, colour becomes dark blue, circular in shape and hot to touch. When it starts growing, blood vessels, red and green originate from it which are similar to the limbs of the crab. Few inner blood vessels grow deep into the body. (Ghanamana Page – 416) (Page – 289, *Sharah Asbab*,

Vol III) (Makhzan-ul-ilaj, 1246 CCRIUM) (Page, 89, *Ilaj-subyan, tadabeer-e-ahsan, Vol-II*)

Cause of Nomenclature

Because it is round and surrounded by blood vessels and appear like a crab therefore it is named as crab (cancer because of its preys on its prey, the same way this inflammation/growth attaches to the tissue of the organ (Nafees) (P-184, *Kitab-ul-Kulliyat, Ibn-rushd*) (P-289, *Sharah Asbab, Vol-III*)

Ulcerative Cancer

When a cancerous tissue ulcerates, its ulcer is blackish and the lips of the ulcer are thick, reddish or greenish and roles outwards. There is exudates of foul smelling watery discharge (sadeed-e-mantin) from it (Samar Qandi) this is the specific characteristic of cancer.

Types of Cancer

Because of few specific characteristic it is classified as:

- i. **Sartan-e-Bashari (Skin Cancer):** It commonly originates from the skin. It is seen in middle and old-age people and occasionally seen in new borns and children most often it develops because of constant and long lasting irritation and sometimes in old scars and old ulcers.

It develops from any one of the following three conditions

- a. Growth of mole with a hard peduncle
- b. Small, round ulcer whose edges are rolled outwards and elevated.
- c. Crack on a hard surface.

It develops from any one of the above conditions and extends into the deeper layers. The outer surface becomes ulcerated and dirty fluid and foul smelling fluid exudates from it constantly. Nearby lymph glands, become inflamed sooner or later. If effective and early treatment is not done the patient dies off very soon.

Treatment: Excision of the effected area along with the effected lymph nodes.

- ii. **(Sartan-e-Akkal, (Corrosive/eroding cancer Rodent Ulcer)**

It is a kind of cancerous cyst (Rasoli) which grows near the nose, eyelids, orbit and cheeks in the form of round, slippery, elevation in the initial stages. It grows gradually. It starts from the deeper layers and reaches the superficial ulcer surface is regular, slippery and pressed in the edges are elevated to some extent and rolled outwards. The exudate is less, less pain or no pain. The lymph nodes are influenced by this cancer and its does not extends to other organs

and it does not metastasizes. But the ulcer spreads and destroys the nearby surroundings tissues until it destroys the bone and finally because of bone destruction, cranium is destroyed and brain matter is exposed. This type of cancer occurs in the age group above 40. The characteristic of this cancer is that it progresses very slowly.

Treatment: Excision and radiotherapy. But the result is not satisfactory.

- iii. **Sartan-e-Hilami:-** This commonly presents in abdominal cavity, stomach, intestines. This is a secondary type of cancer transformed from the 1^o type of cancer.

The cancerous material is placed in different small locule, which is sticky and semi-transparent.

- iv. **Sartan-e-Mukhati (Sartan-e-Umoodi)**

Cancer of mucous membrane, It occurs most often in the gastro intestinal tract, and sometimes breast, liver, cervix and sometimes it occurs in the mucus membrane of Oral Cavity. Firstly this type of cancer, it appears as elevation in the mucus membrane and later it extends into the deeper layers and reaches from mucus membrane to muscular layer. After sometime it ulcerates and its characteristic feature appears. The edges of the ulcer are hard, rolled outwards and elevated. The adjacent lymph nodes get inflamed. It metastasizes to the nearby organs.

- v. **Sartan-e-Ghudi (Sartan-e-Karvi)** Cancer of lymph nodes, This type of cancer appears in the lymph nodes. First it starts from single lymph nodes. Depending on its hardness, softness and speed of spread it is classified into two.

- a) **Sequroos (hard swelling):-** This is a hard swelling. It is named so
b) **Sartan-e-haad (acute cancer):-** (Sartan-e-Mukhi) This type of cancer spreads very fast blood vessels are enormous. It is a soft growth metastasizes very fast into the surrounding tissues and lymph nodes and even ulcerates much earlier. When it is cut in cross section it appears soft and whitish. It resembles Mukh (Liver). This type of cancer appears in breast, testis and other glandular organs.

Treatment of Cancer

It was thought to be untreatable but then also it is treated:-

- i. Treatment is given to stop its growth.
- ii. Treatment is given to prevent it from ulceration.
- iii. If already ulcerated, healing of ulcer is taken care.

(Page- 291, Sarah Asbaab, Vol – III)

In cancer, the Canon recognized cancer as a tumor. He noted that a "cancerous tumour progressively increases in size, is destructive and spreads roots which insinuate themselves amongst the tissue elements." He also attempted the earliest known treatments for cancer with herbs. Another method for treating cancer first described in the Canon was a surgical treatment. It stated that the excision should be radical and that all diseased tissue should be removed, which included the use of amputation or the removal of veins running in the direction of the tumor. He also recommended the use of cauterization for the area being treated if necessary.

The Canon was also the first to describe the symptoms of esophageal cancer and the first to refer to it as "cancer of the esophagus."

Cold Swellings

Swellings which are not hot are caused by sauda, phlegm, fluid and rech.

Sauda

Swellings caused by sauda are of three types.

- i. Hard swelling or simple tumous.
- ii. Cancer-both of which are common in autumn and
- iii. Gland including scrofula (tubercular glands) (khanazia)

And multiple nodules, glands, tumour and cancers differ from one another ordinary glands are district and separate from the neighbouring tissues. Tubercular glands are superficially attached to the skin. Tumour and cancer are, however, a part of the affected tissues and unfiltrate therein.

The different between a tumour and a cancer is that the former is stationary and insensitent to pain, while the latter is a growing, spreading, destructive and malignant swelling which infiltates the tissues in several different directions. A cancer is not necessarily insensitine, but when it has destroyed the tissue, it does become completely insensiture. It is possible that these two varieties of swellings do not differ from each other in nature but in the pattern of their symptoms. Hard Saudani swelling (the tumour) may be hard from the onset, or become hard afterwards. This is especially the case with swellings derived from blood or sometime, phlegm. Glands, tumors and nodule have to be differentiated from gantra. A ganglion is firmly attached to the parts whose it is located and felts characteristically litre the nurves. When disposed with pressure it tends to reappear and does not recover if removed with a strong local application (Page – 148, The General principles of avicenna's Vol – I canon of medicine, Mazhar H. Shah . T. PK)

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