MANAGEMENT OF CANCER WITH MUNZIJ AND MUS’HIL THERAPY: A REGIMEN OF *ILAJ BIT TADBEER* (REGIMENAL THERAPY) IN UNANI SYSTEM OF MEDICINE

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**ABSTRACT**

Cancer is one of the most perplexing diseases which have been plaguing worldwide and had been accounted for 8.2 million of all deaths in 2012 as reported by World Health Organization (WHO) in 2014. According to WHO, it is the second leading cause of death in the developing countries after cardiovascular diseases. American Cancer Society defines it as “a large group of diseases, all characterized by uncontrolled growth and spread of abnormal cells”. Its etiology is still not completely understood but certain dietary factors and environmental agents act on the genetic material in cells leading to the chemical changes that may initiate the progression of abnormal cell mass. The *Sartan* (cancer) is well described in the Unani Classical Medical Literature as “Sartan” or “Warm-e-Sulb-Saudavi”. While going through the literature review of various compendiums written by Unani physicians, it is clear that this system of medicine had vast knowledge about sartan. In spite of the present advanced treatment options there is no effective and satisfactory treatment for cancer. The treatment besides being very expensive, are associated with serious side effects and morbidity due to their toxic effects. The search still continues for a treatment that has minimal side effects and is cost effective.

Unani medicine has produced many useful leads in developing medications for chronic systemic diseases as proved by numerous clinical trials. Therefore, a Unani alternative approach is being explored in the light of classical Unani literature for the management of Sartan as a safe and efficacious treatment option. The role of Munzij and Mus’hil therapy, which is an important part of Ilaj bit Tadbeer (Regimenal therapy) in treating such disorders, is well recognized in Unani classical literature.

**Key Words:** Cancer, Unani Medicine, Sartan, Ilaj bit tadbeer, Munzij, Mus’hil

**INTRODUCTION**

Cancer is a leading cause of death worldwide despite of its development in prevention, diagnosis and treatment. It is the second leading cause of death after cardiovascular diseases, in the developing countries¹,²,³. World Health Organization (WHO) in 2014 reported that cancer has accounted for 8.2 million deaths i.e. around 13% of all deaths in 2012¹,²,⁴. The International Agency for Research on Cancer (IARC) has estimated that there will be 14.1 million new cancer cases each year⁵. In developing countries the most common carcinomas are lung, breast and colorectal cancers which cause more burden than the infectious diseases. The most frequently diagnosed cancers worldwide are the breast cancer in females and lung cancer in males. While, the breast cancer comprises almost one third of all malignancies in females with 1.38 million new cases and 458,000 deaths in 2008⁶,⁷,⁸. The most frequent cancer among males in developed countries is lung cancer which is preceded by prostate cancer⁶,⁹,¹⁰. Dikshit et al reported in 2012 that approximately 5 lakh deaths were due to cancer in 2010 in India².

The American Cancer Society defines cancer as “a large group of diseases all characterized by uncontrolled growth and spread of abnormal cells”⁴. Whereas, Hilal Zaid et al in 2010 defines it as a cohort of diseases characterized by uncontrolled cell proliferation and ability to invade other tissues through direct cell migration or through the blood and lymph systems¹¹.

Cancer is not a new disease but, a new name for an old malady. The word cancer came from Greek word, karkinos¹². Cancer
was described as a *crablike* disease by eminent Greek physician Hippocrates, who observed that it spread all through the body and ultimately bring the life to an end\textsuperscript{10,13}. The history of *Sartan* is as old as the history of human being. The earliest evidence of human bone cancer was found in mummies and ancient manuscripts in ancient Egypt about 1600 B.C. *Hippocratic School* is thought to be the first to document Greek ideas about cancer\textsuperscript{14}. The world’s oldest recorded case of breast cancer hails from ancient Egypt in 1500 BC there was no treatment for the cancer other than palliative treatment\textsuperscript{12}. According to old scripts the surface tumors were surgically removed in a similar manner as they are removed today. The life in cancer patients can be extended due to early identification and treatment which had been realized and emphasized by well-known Unani physicians (Razi; *Abulcasids* and *Ibn-e-Sina*) that the cure is most likely if the cancer was identified as its earlier stage otherwise it is difficult to treat\textsuperscript{14,15}.

**Etiology of cancer with the most accepted theory**

The etiology of Cancer is not completely understood but certain theories suggest that certain dietary factors and environmental agents such as smoking and sunlight act on the genetic material in cells, leading to the chemical changes which may initiate the progression of an abnormal cells mass proliferation\textsuperscript{6}. The principal environmental agents that cause cancer are ionizing radiation, tumor viruses, carcinogenic chemicals and possibly, xenoestrogens. Whereas, Population aging and the unsteady growth in population, as well as a sudden increase in adoption of cancer-associated lifestyle alteration including smoking, “westernized” diets and physical inactivity is continuously further increasing the burden of cancer\textsuperscript{9}. Till now, the most prominent and well accepted etiological theory for cancer suggests that somewhere in DNA structure there is a *gene*, called an *oncogene*, that produces an *abnormal* or *mutant cell*\textsuperscript{9,10}.

**Cancer in view of classical Unani literature**

The description of *Sartan* (cancer) in the *Unani* (Greco-Arabian) system of medicine is suggested its acquaintance in ancient times (131-200 A.D). It is mostly described under the heading of “Sartan” which means “a crab” whereas some others Unani scholars described *Sartan* as “*Warm-e-Sulb-Saudavi*” a type of Saudavi swelling \textsuperscript{14,16}. Other terms for tumors, less often used in ancient literature are *Scirrhus; Struma; Melicercides; Condyloma; Tuberculoma; Occalescict and Carcimode*\textsuperscript{15,17,18,19}. Samarqandi discussed the different types of sartan, as Sartan Bashra (skin cancer), Sartan Akkal (corrosive cancer), Sartan Mukhaati (cancer of mucosa) and Sartan Gudhi (lymph cancer)\textsuperscript{20,21}.

*Hippocrates’ Humoral theory* states that the human body consists of four humors (body fluids) viz. blood, phlegm, yellow bile and black bile. Any imbalance in these body fluids results in a disease condition. “*Warm-e-Sulb-Saudavi*” (Cancer) has also been attributed to the combustion and imbalance of certain humors in the body that leads to the accumulation of excess of black bile in a particular organ site\textsuperscript{12,20,21,22}.

Galen (130-200AD) extended Hippocrates’ definitions of cancer and he further classified tumors into three major types, (i) *Onkoi* (lumps or masses) (ii) *Karkinomas* (non-ulcerating cancers) and (iii) *Karkinomas* (malignant ulcers)\textsuperscript{14,23}. *Sartan* which is caused by *Madda-e-Saudavi-Safrawi* is ulcerative type, while *sartan* which is caused by combustion of *Madda-e-Balghum-wa-Safrawi* is non-ulcerative type. Though, this concept is not universal, as sometimes the above type may progress to ulcerative. The scholars state that the ulcerative type is incurable and fatal \textsuperscript{24}.

Ancient Unani physicians had very vast knowledge of sartan and they very successfully mentioned the sign and symptoms; etiology; types; pathogenesis; differential diagnosis; principles of treatment; treatment along with Dietary regimen in detail\textsuperscript{15,37}, as evident from various compendiums written by eminent Unani physicians e.g. *Hippocrates* (460–377 B.C), *Dioscorides* (40-90 AD), *Galen* (129-200AD), *Tabri* (839–923 AD), *Razi* (854–925AD), *Majoosi* (930-994AD), *Ibn-e-Sina* (980-1037AD), *Ibn Zuhr* (1094–1162AD), *Jurjani* (1042-1136AD), *Samarqandi* (13th-centuryAD), *Ajmal Khan* (1868-1927AD). The management of cancer has also been well elaborated according to pathogenesis and stages of disease. The disease has been classified into five stages and is being treated according to these stages which are mentioned as follows\textsuperscript{15}:

1. Stage of ibtida’-e- marhala (Initial stage)
2. Stage of sartan-e-ghair-mutaqarrah (Non-ulcerative stage)
3. Stage of sartan-e- mutaqarrah (Ulcerative stage)
4. Stage of sartan-e-Khafii (hidden cancer)

Unani physicians have discussed many treatment regimens based on their successful experiences in their respective compendium to treat and cure this fatal and incurable condition. *Razi* (854-925AD), described *Sartan* as a “Marz-e-Muhlik” (fatal disease) in his book *Kitab Al-Mansoori*\textsuperscript{23,25}.

Moreover, *Razi*, *Ibn-Sina* and *Majoosi* in *Kitabul Hawi, Al Qanoon Fit Tib* and *Kamil-us-Sana* respectively discussed the most common sites of *Sartan*\textsuperscript{14,24,26}. They further stated that breast cancer is the most common *sartan* in women while Urethra and testes are the commonest sites for cancer in men.

As per Unani concept cancer is essentially a disease of the black bile humor. According to Avicenna, cancer is a tumor arising from “burning” of the black bile humor. By ‘burn-
ing’ it is meant that the increase of intrinsic heat has become pathological. The cancerous tumor is usually differentiated from benign tumors by the signs of pain, some degree of throbbing, rapid increase in size and acuteness. Cancer is a multi-factorial disease and Unani philosophy is that cancer is the end stage of the degeneration of the metabolic efficiency of the body, the extinguish of the innate heat, primarily by incorrect diet and other imbalances in various aspects of the patient’s life, usually occurring over a long period of time.

Since sartan is a disease of Black Bile Humor (Sauda). It can occur due to imbalance in the black bile humor by excess production of black bile itself or it may take place due to one or more humors (Balgham; Safra) out of balance along with the black bile. Sometimes any abnormal change occurring in the black bile (sauda) may be a leading cause for sartan. There are five types of abnormal changes occur in sauda-excess production of normal sauda, burning of normal sauda in to abnormal sauda, formation of sauda due to combustion of blood, formation of sauda due to combustion of phlegm and formation of sauda due to combustion of safra (bile)”.

It is known fact that the majority of the malignant tumor occurs in incessantly renewing tissues swelling is a manifestation of this black bile substance with the organ. Avicenna notes that cancer occurs mostly in hollow organs. It is also common in the nerves, muscles, tendons, and lymph.

In early stage of disease its size is about the size of almond or may be shorter, thereafter as the disease progresses the size of tumor increases and appears as a red and white development along with greenish spreading out prominent veins. While its roots are obscured in the body like crabs’ tracks and are very strong enough which is an important characteristic of this condition. Cancerous tumors send out crab-like “tracks,” and there is a trend toward blackness, green, and heat. Owing to this character it is named as “Sartan” which means “a crab” (a cancer)”.

**Management of Cancer**

Unani medicine, one of the major traditional forms of medical practice in India, has produced many useful leads in developing medications for chronic systemic diseases as proved by numerous clinical trials. Galen explained that cancer is a metabolic disease and it should be treated systemically rather than locally. Hence, an alternative approach—“Munzij and Mus’hil therapy: an important part of Ilaj bit Tadbeer (Regimental therapy)” is being explored in light of Unani classical literature for the management of Sartan as a better, safe and efficacious substitute to the existing treatment options.

In Unani system of medicine, treatment is carried out in three ways, or there are three principal modes of treatment in Unani system of medicine. These are:

1. *Ilaj bit Tadbeer wa Taghziya* (Regimental and dietotherapy)
2. *Ilaj bid Dawa* (Pharmacotherapy)
3. *Ilaj bil Yad* (Surgery)

**Nuzj and Is’hal** is an important part of Ilaj bit Tadbeer (Regimental therapy).

In his book entitled “Methods of Treatment”, Galen has hypothesized that cancer is a disease associated with black bile humor which is hardly diagnosed at early stages.

In order to treat cancer, Galen has proposed that removal of black bile from the body by means of administering an appropriate purgative, and then the production and accumulation of black bile in vessels should be prevented as far as possible. In case this method is not possible then black bile should be removed from the body at regular time points.

Following principles are to be followed while treating the patients of Cancer (Sartan) by Taadil-e-Mizaj (correction of temperament) and Tanqia-e-Mawad (cleansing of morbidity material) with reference to Nuzj and Is’hal therapy in our classical literature as:

**Taadil-e-Mizaj** (correction of temperament)

In cancer there is imbalance in Humour called black bile (Sauda) which has cold and dry temperament and therefore, by adopting the measures of Ilaj bil-zid (the drugs and food having hot and wet temperament are given. The diet should be saaleh (healthy), *jaiyyadul kaimus* (easily digestable) *latif* (light) having cold and wet temperament but in small quantity. For example: Soups of lean meat, all dry fruits, Kaddu (Cucurbita maxima), Khurfa (Portulaccaoleracea), Cholaee (Amaranthus polygamus), Bathua (Chenopodiumalbum), Kheera (Cucumis sativus), pomegranate, spinach, Badam (Prunus amygdalus), Ma-ul Jubi (whey water), Mans-Shaer (barley water), Mafarreh Mashroobaat (exhilarant fruit juices) like Sharbat-e-saib (Apple juice) along with arg-e-baid-Mushk-wa-arg-e-Neelofar is very effective as a cardiac tonic. These mentioned foods and drinks reduce the excess production and accumulation of sauda and also refresh the body. Strengthening of the affected organ by the aromatic drugs have been well mentioned in Unani classical literature.

**Tanqia-e-Mawad** (Cleansing of morbidity matter)

by Munzij and Mus’hil therapy

The concept of Nuzj and Is’hal in the treatment of the diseases is indeed archaic. Jalinoos, RabbanTabri, Razi have given the importance of Munzij and Mus’hil therapy in their literature, and they themselves treated patients successfully with this mode of treatment. Kabiruddin referring Gilani...
states that when the morbid materials are extracted from intestine or the nearby structures, then it is called as Talyeen (Laxation) and when the morbid materials are extracted from the vessels and other deeper tissues, then it is known as Is’hal (Purgation). The entire regimen consists of two phases: first Nuzj (Concoction) followed by Is’hal (Purgation).

Nuzj (Concoction) is a method by which morbid materials are modified to a form which could be easily evacuated with the help of Mus’hilat (Purgatives). In this way, viscous humors are diluted enough and vice versa for their easy expulsion out of the body. Nuzj (Concoction) is essential in case of all chronic disorders as well as the diseases having duration of more than 40 days. As per the line of treatment given in Unani classical books, Nuzj (Concoction) is a requisite in chronic diseases, but optional in acute diseases depending upon the severity and acuteness of the condition. In cases of phlegmatic diseases, it is mandatory that purgation should be preceded with Nuzj (Concoction). It is optional in bilious diseases. It is not required in sanguineous diseases. In case of sanguineous diseases, moadillat-e-dam-Advia is given instead of Munzij drugs.

The duration of Nuzj varies with different humors:

- Safra-e-khalis: 3 days
- Safra-e-Ghair-khalis: 5 days
- Balghum Raqeeq: 5 days
- Balghum Ghaleez: 12 days
- Sauda-e-Khalis: 15-40 days

Soon after the signs of Nuzj completion appear, the Mus’hil (Purgative) drugs are added to the Munzij drugs.

Mus’hil (Purgative) drugs bring about the Is’hal (Purgation) of the morbid humors (phlegm, sauda and safra) that have been made able to evacuate by the action of Munzijat. It is used to eliminate and evacuate out the morbid materials responsible for the disease.

Depending upon the mode of action, the Mus’hilat (Purgatives) is of different types:

According to the severity of actions:

Mus’hilat-e-Khafeef (Mild purgatives): these are the drugs which simply increase the peristaltic movements of the intestine, but do not produce spasmodic pain in abdomen and produce semi loose motions.

For example: Tubud (Ipomoeae turpethum); Sana-e-Makki (Casia angustifolia).

Mus’hilat-e-Shareed (Strong purgatives): these are the drugs which increase the peristaltic movements of the drugs and bring watery stools without causing the spasmodic pain.

According to the mode of actions:

Mus’hil bit-taleen: The drugs which increase the peristaltic movements of the intestine in such a way that they produce laxative effects causing semi soft motions. For example: Turanjbeen; Sher-e-khiisht.

- Mus’hil bit-ilzlaq: Aloobukhara; Sapistaan; Tukhm-e-Khatmi.
- Mus’hil-e-bit-jila: Boora Armani.
- Mus’hil-e-bit-Aseer: Halailajat; Sharbat-e-ward-mukar.

After the process of purgation has occurred, the drugs for Tabreed are given. Physicians in ancient times used to advise Loab-e-Asphagol in the evening for people of hot temperament; Tukhm-e-rehaan for moderate temperament and Tukhm-e-tera-tezak for cold temperament, but physicians of present era advise Tabreed daily after purgation. The commonly used formulation for Tabreed is as follows:

Khaimeera Gaojaban (7gm) with Loab-e-Behdana (3gm), Sheera Unnab(5 piece) in Arq-e-Gaojaban(100 ml) and Sharbat-e-Banafsha (20ml) is given in the morning.

For Khilt-e-sauda commonly used Unani single drugs as Moad’dil (Alternate); Munzijat (Concoctive) and Mus’hilat (Purgative).

Moad’dil (Alternate Sauda drugs):

Ustookhudoos (Levandula Stoechas); baada’ward (Volutarella Divaricate); baaddranjiboya (Nepata Puderalis); parshiyaoash (Adiantum capillus-veneris); Sapistaan (Cordia dichotoma); Shahatra (Fumaria parviflora); Unnab (Zizyphus vulgaris); Gao-zaban (Borago officinalis); Maweez-e-munaqa (Delphinium staphysagria) etc.

Munzij (Concoctive sauda drugs):

Ustookhudoos (Levandula Stoechas); baada’ward (Volutarella Divaricate); baaddranjiboya (Nepata Puderalis); parshiyaoash (Adiantum capillus-veneris); Asl-us-soosmuqashar (Glycyrrhiza glabra); badiyan (Foeniculum vulgare); Barg-e-Shahatra (Fumariaparviflora); Turanjbeen (Alhagi pseudalhagi); Sapistaan (Cordia dichotoma); Unnab (Zizyphus vulgaris); Gao-zaban (Borago officinalis); Gulqand etc.

Mus’hil (Purgative sauda drugs):

Aamla (Emblica officinalis); Ustookhudoos (Levandula Stoechas); Afteemoon (Cascuta reflexa); Ayaraj-e-feygra (Aloe barbadensis); Burg-e-baaddranjiboya (Nepata Puderalis); Burg-e-Sana-e-Makki (Cassia angustifolia); Bis-fayajh (Polypodium vulgare); Tukhm-e-Baalangoo; Tukhm-e-Kasoos (Seeds of Vitis carnosa); Hub-ul-Neel; Reywandh Khastaayee; Ga’rayqoon (Agaricus alba); Gul-e-gao-zaban
(Flowers of Borago officinalis); Halela siyah (Terminalia bellerica); Halela qabooli (Terminalia chebula) etc.

**Some Important Unani prescriptions on munzij and mus’hil therapy for cancer:**

1. **Unnab (Zizyphus vulgaris)** (5 piece), Gao-zaban (Borago officinalis) (7 gm), Shahatra (Fumaria parviflora) (7 gm), Badaqan (Nepata Puderalis) (7 gm), Badiyan (Foeniculum vulgare); Gao-zaban (Borago officinalis); Baaddranjboya (Nepata Puderalis) (5 piece); Gul-e-Bana (Glycyrrhiza glabra) (5 gm).

The above mentioned drugs are soaked in hot water overnight and after sieving it Gulqand (20 gm) or Turanjbeen (Allhi pseudothalig) (20 gm) is added to it.

2. **Bisfayajh (Polypodium vulgare); Ustookhudoos (Levandula Stoechas); Maweez-e-munaqa (Delphinium staphysagria); badiyan (Foeniculum vulgare); Gao-zaban (Borago officinalis); baaddranjboya (Nepata Puderalis) (9 piece); A’lobukhara; Afteemoon (Cuscuta reflexa) along with Turanjbeen (Allhi pseudothalig) (20 gm) is added to it.

3. **Maweez-e-munaqa (Delphinium staphysagria) (9 piece); Badiyan (Foeniculum vulgare) (5 gm); Asl-us-soos-muqashar (Glycyrrhiza glabra) (7 gm); Parshiyashah (Adiantum capillus-veneris) (7 gm); Anjeer-barbadensi (Ficus carica) (2 pieces) The decoction of the above mentioned drug incorporated with Gulqand Asli (40gm).

4. **Unnab (Zizyphus vulgaris) (5 piece); Gul-e-Banafsha (Flowers of Viola odorata) (7 gm); Gul-e-Neelofar (7 gm); Shahatra (Fumaria parviflora) (7 gm); Tukhm-e-Kasni-Neem-kofta (Chicorium intybus) (7 gm); Beekh-e-Kasni (root of Chicorium intybus) (7 gm); Gul-e-Surkh (Rosa damascena) (24 mg).**

The drugs are soaked in hot water overnight and after sieving it Sharbat-e-Neelofar (20ml) or Sabbeenaj (20 gm) is added to it.

5. **Ayaraj-e-feyqra (Aloe barbadensis); Turbud (Ipomoea Turpethum) (each 3.5 gm); Hub-ul-Neel; Anisson (Pimpinellia anisum) (each 1.75 gm); Sagmonia Biryan; Kateera (Cochlospernum religiosum) (each 6 mg); Tukhm-e-Hanzal (seeds of Citrullus colocynthishred); Ga’rayqoon (Agaricus alba); Sa’lab misri (each 3 mg).** Tablets are made from the Powder of the above mentioned drugs with Arq-e-Gulab.

Dose: 2-4 tablets

6. **Afeemoon (Cuscuta reflexa), Bisfayajh (Polypodium vulgare), Ustookhudoos (Levandula Stoechas), Ga’rayqoon (Agaricus alba), Ayaraj-e-feyqra (Aloe barbadensis), Turbud (Ipomoea Turpethum).**

7. **Ayarjalaalite Ayaraj-e-feyqra (Aloe barbadensis) or Ayaraj-e-Jalinoos or Ayaraj-e-Roofas to eliminate the mors and for Taadil-e-Mizaj (1 gm); Shem-e-Hanzal (seeds of Aloe barbadensis) (20 gm); Ustookhudoos (5 gm); Asl-us-soos-muqashar (Glycyrrhiza glabra) (7 gm); Gul-e-Surkh (Rosa damascena) (4 mg); Namak-e-Hindi (4 mg); Maweez-e-munaqa (Delphinium staphysagria); badiyan (Foeniculum vulgare) (5 piece); Badiyan (Foeniculum vulgare) (7 gm); Muqil (Commiphora Mukul) (4.5mg); and Rogan Badam (Prunus amygdalis) (1mg).

Dose: Half tablet should be administered in the night and remaining half in morning but in empty stomach.

**CONCLUSION**

Cancer is the second leading cause of death in the developing countries after cardiovascular diseases. Its etiology is still not completely understood. The knowledge of Sartan (cancer) in the Unani system of medicine is well described in the Unani Classical Medical Literature as “Sartan” or “Warm-e-Sulub-Saudavi”. Unani System of Medicine has produced many useful leads in developing medications for chronic systemic diseases as proved by numerous clinical trials. The eminent Unani physicians like Hippocrates, Avicenna, Rhazes and Al-Zahrawi had well described the information about the cancer and the principles laid down by them were well recognized in medical science and influenced the medical world for many centuries. Hippocratic School is thought to be the first to document Greek ideas about cancer. According to inscriptions, surface tumors were surgically removed in a similar manner as they are removed today. Early identification and treatment had been realized and emphasized by eminent Unani physicians (Razi; Abulcasis and Ibn-e-Sina) that the cure is most likely if the cancer was identified as its earlier stage otherwise it is difficult to treat. The present treatments for cancer include surgery, radiation, and chemotherapy with a goal to eradicate as many cancer cells as possible. In spite of all these, there is still no cure and besides being enormously expensive, these medicines are associated with serious side effects and morbidity due to their toxic effects. In such a scenario, the search continues for an ideal treatment that has minimal side effects and is cost effective. Unani Medicine might be a potential safe treatment for cancer. Thus, a Unani alternative approach—“Munzij and Mus’hil therapy: an important part of Ilaj bit Tadbeer (Regimenal therapy)” can be explored for the management of Sartan as a better, safe and efficacious treatment option.

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