

CLINICAL EVALUATION OF THE EFFICACY OF A UNANI  
COMPOUND DRUG IN IZDIAD-E-SHAHAMADUD DUM  
(HYPERLIPIDAEMIA)



THESIS

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## Chapter 05

### Discussion and Conclusion

*Izdiad-e-Shahamadud dum* is a metabolic disorder, in which the quality and quantity of *ghair taba'i Balgham* altered, by which most of the vital structures like heart, brain and kidney are affected and lead to fatal consequences. According to modern theory, some plasma lipids are beneficial to the body and some are harmful to the body. High-density lipoprotein (HDL) protects against atherosclerosis, where as increase in the plasma cholesterol, triglycerides and low-density lipoprotein (LDL) increase the risk of atherosclerosis.

Both hypercholesterolaemia and hypertriglyceridaemia by far the leading cause of the death in USA. (Indian Journal of clinical practice, 2004.)

The same opinion given by Gotthard Schettler. In the atheroma the narrowing arteries causing heart attacks, with this type of condition in USA. 1.5 million People had the heart attacks in 1988, out of them 5, 40, 000 people died. This indicates the magnitude of the disorder. (Indian Journal of Clinical Practice, 2005).

It is commonly distributed disorder most part of the world and in Asia. The European study revealed that the incidence or proportion of Hypercholesterolaemia in Asia is similar to that of British population. Most of the vital structure like, cerebrovascular, cardiovascular, renal and hepatic also involve in hypercholesterolaemia and leads to fatal.

There are quite number of lipid lowering drugs in modern system of medicine, but which are very expensive and having side effects. Therefore in this study

some Unani herbal drugs have been selected which are widely known to the ancient Unani physicians and vivid references available in Unani literature like khazainul adviya, Maghzanul adviya, Kitabul Adviya etc.

The drugs selected for this study have the actions of *mulattif*, *munzij*, *mufattih-e-sudad*, *muqavvi-e-meda vo jigar* etc. i.e. thinning the morbid humors, making bio chemical changes in it and removes the obstruction, same time they correct the digestions by strengthening the stomach and liver, so that pure humours are produced. (Ibn cena, (1983); Kirmani Nafees bin Auz (1935). It has been scientifically proved that Garlic, Zedoary and Gugul have lipid lowering effect, shown in animals. (CCRA & S (1992.); National Institute of Science Communication (NISCOM), (2001), Keeping in view of these references, the compound research drug (Garlic, Curry leaves & Zedoaria) was tried with a single comparative herbal drug (*Habe-Muqil*) as hypolipidaemic drugs in human beings and found good results.

Muqil which is having the qualities of anticholesterol, in the treatment of hypercholesterolaemia. (Ivan Ross – 2003) Kapoor, Nityan and et al 1971, Malhotra, Agrawa 1970, Satyavti, Dwarakanath G.V., Tripathi et al (1969), Gupta 1972, Anand S.M. and N.K.Kapoor 1984, and Anti inflammatory, Antirheumatic, Noor Kareem 1885, Hk. Najmul Ghani 1921, Zahoorul Hassan 1989, Gujral and M.L.Sareen et al (1960). It is known Anti-obesity drug studied by Shastri 1976. Kapoor et al 1976 and Singh 1980 analytical study revealed that the *Commiphora muqil* reduces the serum cholesterol 30 % and LDL 15 to 20%. Apart from the above said actions it is also an astringent, antiseptic,

carminative, like other oleo resin it causes the increases of leukocytes on the blood and stimulate phagocytosis, it acts as an expectorant, diuretics, uterine stimulant are mentioned in Wealth of India and Medicinal plants of the World by Ivan A. Ross., have made us to take this drug as a comparative medicine.

### **Objective 1: Evaluation of efficacy of the research and Comparative drugs**

- The efficacy of Research compound drug was worked out on the basis of various biochemical indicators of this disease.
- Serum total Cholesterol and Triglycerides are the main biochemical indicators of hyperlipidaemia. This compound drug exhibited a highly significant effect in reducing the levels of serum cholesterol and triglyceride. (Tables 9-14)

This effect most likely is due to the following reasons.

- (a) Some chemical constituents present in this research drugs inhibit the absorption of dietary fat by inhibiting their hydrolysis.
  - (b) Body weight reducing effect of test drugs, because reduction in weight of the body reduces the level of cholesterol and triglyceride in Blood.
- LDL – cholesterol and VLDL – cholesterol is major carrier of cholesterol and triglycerides in blood respectively.

- Increase in serum cholesterol reflects the increase in serum LDL and increase triglyceride reflects the increase in serum VLDL cholesterol. (Table 9-14)
- The compound drug has also shown the reduced level of serum LDL - cholesterol VLDL -cholesterol. It may most likely to be attributed to the serum cholesterol and triglyceride lowering effect of this research drugs.
- Oxidized LDL cholesterol has been considered to play key role in the pathogenesis of atherosclerosis the rate of deposition is directly proportional to the concentration of cholesterol in blood.
- The drugs of Both groups have antioxidant properties, therefore may lower or inhibit oxidation of LDL- Cholesterol
- HDL Cholesterol is considered as protective against atherosclerosis and ischaemic heart disease because it moves cholesterol from peripheral tissues to the liver. This process is called as 'good transport from the cholesterol' because this reduces concentration of plasma cholesterol.
- The effect of both groups of drugs is increasing the level of HDL cholesterol. (Table 9-14).Most probably this effect may be due to the weight reducing effect of the drugs and also due to reduction serum triglycerides concentration because both of which are inversely related to the level of HDL cholesterol in blood .

- Obesity or overweight is the most important feature associate with hyperlipidaemia. The effect of the drugs in reducing the body weight is highly significant.

This effect is mostly due to the inhibitory action of research drugs Zaranbad (*Curcuma Zedoria*), Lahzan (*Allium sativum*), Kariyapak (*Murraya koenigii*) - for group-A; Muqil / Gugul (*Commiphora muqil*) for group-B on absorption of dietary fat by inhibiting its hydrolysis and as a result it may prevent accumulation of adipose tissue weight.

- The Unani text book Zakhira –e- Kwarizam shahi Md. Hadi Husain Khan, (1902) also mentions the discrepancies of humours like phlegm which is vitiated and accumulated in the vessel wall, which is reduced by physical exercises.

- Along with the major role of increased concentration of lipids in blood in pathogenesis of atherosclerosis and IHD, increased blood pressure level is also considered to play an important role in causing initial damage to endothelium of arterial intima in pathogenesis of atherosclerosis. (Bayness Dominiczac, 1999)

#### ☺ **Blood Pressure:**

The effect of test drugs in lowering blood pressure (Systolic as well as diastolic). (Table 15)

This may be due combined effect of reduction in weight of the body, which leads to reduction in blood pressure. The committee report of Scott .M.Gundy,

David Bilheimer, Henry Blackburn and Virgil Brown, 1982 also says that by reducing the body weight, blood pressure can be lowered.

☺ **Joint pain:**

During this study it was observed that out of 60, 30 patients having pain in their knee joint and 18 patients got relief pain at the end of treatment .(Table No.07) The overall effect was 60%. This may most likely be due to the actions of *Muhallil & Musakkin* (anti inflammatory, analgesic) and additionally due to the body weight reducing property of these drugs

☺ **Dyspnoea (on exertion):**

During this study it was observed that out of 60, 20 patients having Dyspnoea (on exertion) and 12 patients got relief end of treatment. The overalls effect was 60%, this may most likely be due to the body weight reducing property of research drugs (Table No. 07)

Because excessive body weight leads to deterioration in vital capacity of lungs and decrease the compliance of the lungs and this in turn results in increased in respiratory rate to compensate the oxygen demand of different body tissues.

☺ **Palpitation:**

out of 60, 05 patients having Palpitation and 02 (40%) got relief in the end of treatment.(Table No-7 ) The most probable reason behind this due to the *Muqavvi -e- Qalb* (cardio tonic) effect of the research drugs. These actions have been mentioned in *Khazainul Adviya and Wealth of India*. (Mohd Najmul

Ghani.A.,H.M. ,1926, National Institute of Science Communication (NISCOM), 1985,1998, 2001)

#### ☺Chest pain:

It was observed during the study that out of 60 patients, 04 patients having pain in their chest, It may be due to the accumulation of atheromatous plaques and making the narrowing of the coronary vessels. Hypercholesterolaemia is considered to be a risk factor of coronary heart disease. (Caroline Thomus (1957); Further in Unani pathology also it is mentioned as a type of *ghair taba'i balgham* – (*shaham / dsoomat / oily substance*) especially *balgham-e-zujjaji* produces vascular obstruction (*sudda-e-urooq*) and leads to *Voj-e-ul qalb* (angina pectoris), *Zightud dum qavi* (hypertension), *zof-e-qalb* (heart failure), *Falij* (paralysis), *Zof-e-kulliya* (renal failure) etc. (Majoosi Ali-bin Abbas, (1889); Kirmani Nafees bin Auz. (1918).In this study 03 patient got relief of chest pain (75%) at the end of the study. (Table No. 07)

The most probable reason behind this effect may be:

- a) Reduces the work load on the heart and in turn decreases the Demand of cardiac muscles for oxygen and blood.
- b) Decrease in viscosity of blood and in turn may improve coronary circulation. (All research and Comparative drugs are having *Mulattif* action i.e. thinning the morbid humour and also having the actions of *Muqavvi-e-qalb* i.e. cardio tonic and *Mufattih-e-sudad* i.e. Deobstruent.
- c) Decrease in blood lipids level may also decrease the degree of atherosclerosis, which in turn improves coronary circulation.



#### ☺Feeling of heaviness:

The mean body weight reduction recorded after the treatment 5.56kg. i.e. 18.53% in group 'A' like wise 3.14 kg. i.e. 10.46% in group 'B'.

Most probably this may be due to body weight reducing effect of research drug and the comparative drug also due to reduction of serum triglyceride concentration. Those drugs are having *Muqavvi-e-meda vo jigar*, *Mulattif* and *Mukhrij-e-balgham* actions. I.e. these drugs induce the production of *Taba'i balgham* (good phlegm) and expels the excess and *Ghair taba'i Balghasm* (morbid phlegm). Therefore when the excess *balgham* was removed the body felt comfort.

#### ☺Giddiness:

In this study 5 patients complained of giddiness, after ninety days of treatment 3 patients got relief the symptom. Most probably this may be due to *Muqavvi-e-qalb*, *Mulattif*, and *Mufattih-e-sudad* effects of both groups of drugs. Through these actions, improves the blood circulation to the brain, heart and other vital organs.

#### ☺Pedal oedema:

During the research 2 patients had pedal oedema and during treatment the symptom disappeared. This may be due to the actions mentioned above, such as improve the circulation via the Deobstruant action, thinning and expelling action and strengthening the vital organs.

©Numbness

In this clinical study 20 patients had numbness in hands and feet. During and after the treatment it was relieved in 14 patients i.e.70%. Most probably this may be due to improve the circulation via the deobstruant action, weight reducing effect of the drugs. .

Objective 2:

Comparative literary study on hyperlipidaemia condition with classical clinical picture of *Izdiad -e- shahamadud dum* condition.

Through the literature review of both Unani and modern concepts of *Izdiad-e-shahamadud dum* and Hyperlipidaemia the following clinical pictures were noted. The detailed reviews are mentioned in chapters 2 and 3.2

13	Headache	Headache
14	High blood pressure	High blood pressure
15	Swelling of feet	Swelling of feet
16		Swelling of feet
17		Swelling of feet
18		Swelling of feet
19		Swelling of feet
20		Swelling of feet
21		Swelling of feet
22		Swelling of feet
23		Swelling of feet
24		Swelling of feet

Hansen J. Karabudakci, Hecmet (1970), Mawad Ali Bin Abbas (1825), Hecmet  
Mawad Ali Bin Abbas (1825), Chaudry S. K. (1924), Mawad G.W. Choudhury,  
Bughra D. N. Hecmet Choudhury and Ezzat Chifera Ezzat, 1993, Vasudevan D.M., Sikurani  
D.1975 .

**Tabl No.-1 Classical clinical picture of Izdiad -e- shahamadud dum**

**Condition.**

	Clinical Symptoms & Signs of hyperlipidaemia	Alamat of Izdiad-e-shahamadud dum
1.	Joint pain	Dard-e-mafasil
2.	Dyspnoea (On exertion)	
3.	Palpitation	Khafkhan
4.	Chest Pain (mild)	Vojai ul qalb
5.	Feeling of heaviness	Bojh ka mehsoos
6.	Giddiness	Duar
7.	Pedal Oedema	Paun mai sojen
8.	Numbness	Khadar
9.	Xanthoma	
10.	Xanthesma	
11.	Arcus cornea	
12.	Heaviness of head	Sar mai bojh
13.	Headache	Dard -e- sar
14.	High blood pressure	Zightud dum qavi
15.	Feeling of Fatigue	Takaan
16.		Excessive Pallor
17.		Excessive Salivation
18.		Cold & Moist Glow
19.		Excessive Sleep
20.		Decreased Thirst
21.		Weak Digestion
22.		Mental Dullness
23.		Soft Pulse of slow Rate
24.		Dreams of water

Husain M.Kamaluddeen Hamdani, (1980), Majoosi . Ali Bin Abbas , (1889), Hakeem Mohammed Hasan Qarshi (1992), Chaudhry Sujit K.(2000), .Edwards R.W.Christophoer, Boucher D.I.N.Haslet Christopher and Edwin Chilvers Edwin, 1996. Vasudevan D.M., Srikumari S. 1995.

Most of the clinical features mentioned in Unani classics of *Izdiad-e-shahamadud dum* are more related with that of hyperlipidaemia in modern literature.

Most of the clinical pictures mentioned in both literatures were noted in my patients during this clinical study too. (Table No.07)

**Objective 3:** Detecting the Hyperlipidaemia prone population by applying classical *mizaj* (Temperament) concept of Unani system of medicine.

The Unani system of medicine depend upon the theory of humours as the basic concept where in their equilibrium maintains health and their imbalance, result in pathological condition. According to dominance of *khilt*, the *mizaj* of the patients were assessed. However the relationship between this disorder and Mizaj is clearly mentioned in some Unani Literature.

In this clinical trial, the study of *Mizaj* was assessed according to sign and symptoms and nature of patients by using the *Mizaj* criteria prepared by CCRUM. (See *Akhlat* - Humours diagnostic card).

It was observed that incidence of the Phlegmatic (*Balghami*), Sanguineous (*Damavi*) and Bilius (*Safravi*) temperaments were 37(62%), 18(30%) and 5(08%) respectively. No case of Melancholic (*Sawdavi*) temperament was reported. (Figure: 05)

The "Balghami" Mizaj (phlegmatic temperament) patients were dominant in this study - 37 Patients ie (62%). (See table 05). This result is co-related with the concept of Unani pathophysiology of *ghair taba'i balgham* (fat / *dosoomat*/ oily substance) mentioned in classical literature, which is described in literature review in chapter 3.2

Therefore through applying classical *mizaj* (Temperament) concept of Unani system of medicine and analyzing the *Alamat* (clinical features) of people it shows that the *Balghami mizaj* people are more prone to get *izdiad -e-shahamadud dum* (Hyperlipidaemia).

When analyze this age old theories our ancestors have used different clinical criteria to forecast diseases and must have prevented it.

In contrast at the scientific era there are modern medical laboratory packages to forecast the health. But these tests are expensive or not available in rural areas.