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Research Article

Role of Evacuation via Diaphoresis in the management of Chronic Renal Failure: An Appraisal

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ABSTRACT:
Nazariya-e-Akhlat (Humoral theory) is the mainstay in the theories and philosophies of Unani medicine. Unani scholars elucidated the four humours of the body; *Dam, Balgham, Safra* and *Sauda* which are the product of digestion and metabolism. These humours must be normal in terms of quality and quantity to maintain health. *Imtila Bihasbil Awy﹒iah* and *Imtila Bihasbil Quwwah* co-exist in the etiopathogenesis of chronic renal failure. The morbid matter must be removed from body via various modes of *Istifragh* to restore health. *Ta'riq* is one of the modes of *Istifragh* adopted when treating various ailments. It is used to eliminate toxic and other unwanted matter through sweating. Many patients of CRF do not get much needed dialysis to remove excess blood urea and serum creatinine due to financial crisis or living in remote areas. Stimulated sweating not only reduces the fluid burden of intravascular compartment but also significantly removes BUN. Such patients of CRF might be benefitted by *Istifragh* via *Ta'riq*.

Keywords: Istifragh, *Ta'riq*, Chronic Renal Failure, ImtilaBihasbilAwy﹒iah,ImtilaBihasbil Quwwah

INTRODUCTION:

Nazariya-e-Akhlat (Humoral theory) postulated by father of medicine Buqrat remains mainstay in the theories and philosophies of Unani medicine. According to this theory human body possess four kinds of humours known as *Akhlat-e-Arba*. These are *Dam, Balgham, Safra* and *Sauda* which are product of digestion and metabolism[1]. These humours are kept in complete harmony with their environment in order to maintain health. Abnormally increased quantity of humours leading to engorgement of vessels is called as *Imtila Bihasbil Awy﹒iah*. But, on the other hand, adverse change in the quality of humours is termed as *Imtila Bihasbil Quwwah* or *Imtila Bihasbil Kaifiyyah*[2].Any change in the normal quality and quantity of these humours may lead to

diseases. These morbid humours are the actual causes of diseases and aggravate the disease process if remain stagnant in the body. In order to restore health, these abnormal causative humors are eliminated from the body by a method known as *Istifragh*[3,4,5]. In Unani medicine evacuation of matters is carried out by various modes like *Fasd* (venesection) *Hijama* (cupping), *Ta‧liq* (leeching), *Idrar-e-Tams* (Induction of menstruation), *Ta'riq* (diaphoresis), *Hammam* (Turkish bath), *Idrar-e-Laban* (lactation), *Tanfis* (expectoration), *Ishal* (purgation), *Qay* (emesis),*Huqna* (enema), *Idrar-e-Bawl* (diauresis), *Tanaffus* (respiration) and *Jima* (sexual intercourse)[6,7,8,9].

Ta'riq* (diaphoresis) as a mode of *Istifragh: *Ta'riq* is one of the modes of *Istifragh* adopted when treating various ailments[10]. It is used to eliminate toxic and other unwanted matter through sweating. *Ta'riq* is one of the normal physiological processes of excretion of waste materials through sweat glands of the skin[11,12]. There are various methods of producing sweat. These methods are of two types i.e. *Ta'riq-e-Muqami* (induction of localized perspiration) which include *Riyazat* (exercise) of affected part, *Abzan* (sitz bath), *Dalk-e-Muqami* (local massage), *Natul* (irrigation), *Skub* (douche), *Inkibab* (steam inhalation), *Takmeed* (local fomentation) and *Bakhur* (Fumigation). The other type is *Ta'riq-e-Umoomi* (induction of generalized perspiration).

Hammam-e-Mua‧rriq, *Hamma-e-Shamsi* (sunbath), and *Riyazat* are the methods by which the sweat is excreted from the whole body in large quantities. Various studies have shown the usefulness of *Ta'riq* in the many diseases like chronic renal failure, nephrotic syndrome, nephritic syndrome, dermatitis, psoriasis, cirrhosis of liver and CHF.

Istifragh via sweat is not only beneficial in lowering the body temperature specially in summers but there are various diseases in which sweating may be induced by appropriate methods as a treatment. The techniques of *Ta'riq* used by Unani physicians in various diseases are still applicable and beneficial in health care[13].

Composition of sweat: During *Ta'riq* eccrine and apocrine sweat glands secrete a clear odorless solution known as sweat. It mainly consists of the secretions of eccrine glands. Average composition of human sweat is as follows[14]:

Water	99.22-97.74 g/100 ml
Solids	1.174-1.587 g/100 ml
Ash	0.144-0.566 g/100 ml
Creatinine	0.1-1.3 mg/100 ml
Urea	12-57 mg/100 ml
Lactic acid	285-336 mg/100 ml
Carbolic acid	2-8 g/100 ml
Sugar as glucose	1-3 g/100 ml
Uric acid	0.07-0.25 mg/100 ml
Ascorbic acid	70.5 µg/100 ml
Total nitrogen	33.2 mg/100 ml
Non-protein nitrogen	27-64 mg/100 ml
Amino acid N	1.1-10.2 mg/100 ml
Ammonia N	5-9 mg/100 ml
Urea N	5-36 mg/100 ml
Calcium	1-8 mg/100 ml
Iodine	0.5-1.2 µg/100 ml
Iron	0.022-0.045 mg/100 ml
Chloride	36-468 mg/100 ml
Na^+	24-312 mg/100 ml
K^+	21-126 mg/100 ml
Sulphur	0.7-7.4 mg/100 ml
Copper	0.006 mg/100 ml
Amino acids (total)	43.62 mg/100 ml

Chronic renal failure (CRF): It is a syndrome characterized by progressive and irreversible deterioration of renal function due to slow destruction of renal parenchyma. Acidosis is the major problem in CRF with development of biochemical azotaemia and clinical uraemic syndrome[15]. Azotemia is a biochemical abnormality that refers to an elevation of blood urea nitrogen (BUN) and creatinine levels, and is related largely to a decreased glomerular filtration rate (GFR)[16,17].

There are two groups of diseases which may culminate in CRF; diseases causing glomerular

pathology and those causing tubulointerstitial pathology. Injury to the glomerulus causes development of the nephrotic syndrome which is characterized by proteinuria, hypoalbuminemia and edema.

Tubulointerstitial damage results in alterations in reabsorption and secretion of important constituents leading to excretion of large volumes of dilute urine. Irrespective of initial causes CRF develop gradually through four stages:

1. Decreased renal reserve: At this stage, GFR is about 50% of normal, blood urea nitrogen (BUN) and creatinine are normal which indicates minimal renal parenchymal damage and functional kidney.

2. Renal insufficiency: At this stage GFR remains 25% of normal, BUN and serum creatinine are elevated indicating destruction of 75% of renal parenchyma.

3. Renal failure: At this stage 90% of renal parenchyma is destroyed. GFR is 10% of normal leading to edema, metabolic acidosis, hypocalcemia and signs & symptoms of uremia.

4. End stage kidney/chronic kidney disease (CKD): GFR remains less than 5% of normal resulting in uremic syndrome[18].

Chronic kidney disease (CKD): Based on the estimated glomerular filtration rate (eGFR) CKD is categorized into five stages:

Stage 1 CKD: At this stage eGFR ≥ 90% which shows mild kidney damage with no symptoms.

Stage 2 CKD: eGFR remains between 60-89 with proteinuria.

Stage 3 CKD: Kidneys get moderately damaged with eGFR between 45-59 and 30-44 in stage 3a and stage 3b respectively.

Stage 4 CKD: It is last stage of CKD before kidney failure. At this stage eGFR is between 15-30 indicating moderately or severely damaged kidney.

Stage 5 CKD: At this stage eGFR remains <15 which means the kidneys are getting very close to failure or have completely failed[19].

DISCUSSION:

Almost all scholars of Unani medicine are in opinion that morbid matter must be removed from the body by various modes of *Istifragh*. In chronic renal failure, *Imtila Bihasbil Awiah* and *Imtila Bihasbil Quwwah* co-exist and if left untreated may cause serious problems. In the last stage of CKD where only 10-15% of kidney function is left, dialysis or transplant is needed. Unfortunately, many patients from remote areas find it very hard to get any treatment. In a study it was found that stimulated sweating could lower the BUN[20,21,22].

Some researchers found that stimulated sweating can be used as a valuable adjunct to chronic intermittent hemodialysis in the patients of CRF[23].

According to a study increased levels of blood urea and serum creatinine could be significantly decreased via stimulated sweating. It is also documented that stimulated sweat glands are able to remove BUN nearly two times faster than that of basal condition[6].

CONCLUSION:

In the light of above discussion, it is concluded that *Imtila Bihasbil Awy﹡iah* and *Imtila Bihasbil Quwwah*, the mainstay of etiopathogenesis of CRF, could be significantly corrected via *Ta'riq*. Those patients of CRF who are unable to get much needed dialysis, might be benefitted by *Ta'riq*. The burden of azotemia and its complications could be decreased by this regimen.

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