



ISSN: 2456-0057

IJPNPE 2019; 4(1): 1922-1925

© 2019 IJPNPE

www.journalofsports.com

Received: 24-11-2018

Accepted: 28-12-2018

**Dr. Shahid Suhail**

Assistant Professor, Department of Moalajat, Deoband Unani Medical College, Hospital and Research Centre, Dist. Saharanpur, Uttar Pardesh, India

**Dr. Irshad Ahmad**

Assistant Professor Department of Ilaj Bit Tadbeer Deoband Unani Medical College, Hospital and Research Centre, Dist. Saharanpur, Uttar Pardesh, India

**Dr. Mohammad Ali**

Assistant Professor, Department of Moalajat, Deoband Unani Medical College, Hospital and Research Centre, Dist. Saharanpur, Uttar Pardesh, India

**Dr. Shama**

Associate Professor, Department of Ilmul Atfal, Glocal College of Unani medical science and Research centre Saharanpur, Uttar Pardesh, India

**Dr. Fateh Ali Tijo**

Assistant Professor Department of Kulliyat Jamia Tibbiya Deoband Saharanpur Highway Dist. Saharanpur, Uttar Pardesh, India

0

**Correspondence****Dr. Fateh Ali Tijo**

Assistant Professor Department of Kulliyat Jamia Tibbiya Deoband Saharanpur Highway Dist. Saharanpur, Uttar Pardesh, India

## Indication of FASD (Venesection) in *Amraze-jild* (Skin diseases) in classical unani literature: an overview

**Dr. Shahid Suhail, Dr. Irshad Ahmad, Dr. Mohammad Ali, Dr. Shama and Dr. Fateh Ali Tijo**

### Abstract

*Fasd* (venesection) is a method of *Istifrage-kulli* (general evacuation). It removes *madda-e-fasida* (Morbid material) in the same proportion as present in the blood vessels or the abnormal humour or both. *Amraze-jild* (Skin diseases) are treated in multiple ways like through *Dakhili Iste'maal* (oral medicine), *Hijamah* (cupping), *Taleeq* (leeching), *Fasd* venesection, *Musaffiyat* (blood purifiers), *Zimaad* (Medicated paste applied externally) etc. Among these, one of the best options is *Fasd* (venesection). It is used in *amraze-jild* (skin diseases) which are due to *Sue-mijaz Damvi* (derangement of Blood) like *Phalghamooni* (phlegmon), *Judaree* (smallpox), *Dummal* (Furuncle), *Banaat-ul-lail* (urticaria), *Daakhis* (paronychia), *Baadashnaam* (rosacea) *Taa' on* (plague), *Anoorisma* (aneurysm) *Surkh Baada/Humrah* (erysipelas), *Namlah* (herpes zoster) *Hasbah/Khasra* (measles) etc. *Fasd* (venesection) is used in Unani system of medicine to treat diseases of various systems of the body but in this review we will discuss only its usage in *Amraze-jild* (skin diseases) which are mentioned in our classical literature by eminent Unani Scholars.

**Keywords:** *Fasd*, *Amraze-jild*, *Judaree*, Unani, Skin diseases

### Introduction

FASD (Venesection) it is also known as phlebotomy, venepuncture, blood draw, drawing of the blood, or taking blood. Actually it is a procedure in which an incision is given to any of the superficial vessels and blood containing *madda-e-fasida* (Waste material) is allowed to flow. FASD (Venesection) enjoys great importance in the management of various diseases<sup>[1]</sup>. But in this review we will discuss only its usage in *Amraze-jild* (Skin diseases) which are mentioned in our classical literature by eminent Unani Scholars.

The skin is one of the largest organs in the body, having a surface area of 1.8 m<sup>2</sup> and making up about 16% of body weight. Skin thickness ranges from 1 to 4 mm. This thickness, and those of each of its layers, varies in different areas of the body. The epidermis is generally thin. It is particularly so in the skin of the eyelids: approximately 0.1 mm. The epidermis is particularly thick in the soles and palms, where it is approximately 1 mm deep. The dermis is up to 20 times as thick as the epidermis. It tends to be particularly thick on the back, where it can be approximately 3 to 4 mm<sup>[2]</sup>. It has many functions, the most important of which is as a barrier to protect the body from noxious external factors and to keep the internal systems intact. Skin is composed of three layers: the epidermis (*Bashra/Bairooni Tabqa*), the dermis (*Adma/Androoni Tabqa*) and the subcutis *Tahat-ul-Adma* (Hypodermis)<sup>[3]</sup>. Other name of subcutis is subcutaneous tissue (Pannicius). The epidermis, is the outermost layer, which is formed by an ordered arrangement of cells called keratinocyte, whose basic function is to synthesize keratin, a filamentous protein that serves a protective function.<sup>[4]</sup> The layers of the epidermis are named for these characteristic traits. For example, as mentioned, the first layer is

the basal layer because it is located at the base of the epidermis. Basal cells are cubical in shape. The next layer is referred to as the spinous layer (*Tabqa Shawkiya*) because the cells in this layer have prominent, spiny attachments called desmosomes. Desmosomes are complex structures composed of adhesion molecules and other proteins and are integral in cell adhesion and cell transport. The next layer is the granular layer (*Tabqa Hububiya*), named so because these cells contain visible keratohyaline granules. The last, outermost layer is the stratum corneum (SC) (*Tabqa Qarniya*), a condensed mass of cells that have lost their nuclei and granules. The SC is covered by a protein material called the cell envelope, which aids in providing a barrier to water loss and absorption of unwanted materials [5].

**Dermis:** The dermis forms the layer below the epidermis and is thicker than the epidermis. The dermis is mainly made up of collagen and elastin fibers. It also contains blood vessels, nerves, sensory organs, sebaceous glands, sweat glands, and hair follicles.

**Subcutis:** This layer lies beneath the dermis and consists of fat cells. The subcutaneous tissue constitutes the largest volume of adipose tissue in the body. The thickness of the subcutaneous fat varies from one area of the body to another. It is especially thick in the abdominal region and thin in the eyelids. Fat cells are derived from mesenchymal cells, as are fibroblasts. They are organized into lobules by fibrous septae, which contain most of the blood vessels, nerves, and lymphatics that nourish the skin. The subcutaneous tissue serves as a receptacle for the formation and the storage of fat as well as a site of highly dynamic lipid metabolism for nutrition. It also provides protection from physical trauma and insulation to temperature changes [6]. A continuous arteriovenous meshwork perforates the subcutaneous tissues and extends into the dermis. Blood vessels of varying sizes are present in most levels and planes of the skin. In fact, the vascularization is so extensive that it has been postulated that its main function is to regulate heat and blood pressure of the body, with providing nutrition to the skin a secondary function. No blood vessels are present within the epidermis. The nerve supply of the skin consists of sensory nerves and motor nerves [6].

## 2. FASD (Venesection)

FASD (venesection) is also known as Phlebotomy, Venepuncture, Blood draw, Drawing of the blood. Taking Blood. It is a method of *Istifrage-kulli* (general evacuation). It removes *madda-e-fasida* (morbid material) in the same proportion as present in the blood vessels or the abnormal humour or both. (1)

### 2.1 Importance functions of FASD

- To evacuate the extra volume of blood causing the Hypertension
- To prevent accumulation of toxic and morbid matter
- To evacuate morbid matter from different part of body
- To stimulate metabolic functions
- Prevention of disease due to menopause
- To maintain the normal physic in bilious temperament individuals [7, 8].

## 3. Indications of vein for skin diseases

*Basaleeq /Tannor Badan* (Basilic vein)

- Medial side in elbow joint

## Qeefal /Sararoo (Cephalic vein)

- Lateral side in elbow joint

## Akhal /Haft andam (Median cubital vein)

It connects *Baseeq* & *Qeefal* on anterior side of elbow joint

## Ibti (Axillary vein)

Branch of *Basaleeq*

## Safin/Mahfooz rag (Saphenous vein)

Medial melleolus

## 3.1 Diagnosis of Skin Diseases

The diagnosis of skin diseases depends on a good clinical history, detailed physical examinations and accurate usage of the lexicon of dermatology, to be able to identify the primary and secondary skin lesion and to recognise the various pattern formed by them. Some investigation like Magnifying lens, Glass slides, wood's light, photo-patch testing skin biopsy, serological test for syphilis, serological test to detect HIV infection, Antinuclear antibody indirect immune-fluorescence test in bullous disorders [9].

Macules are up to 1 cm and are circumscribed, flat discolorations of the skin. Examples: freckles, flat nevi.

Patches are larger than 1 cm and are circumscribed, flat discolorations of the skin. Examples: vitiligo, senile freckles, measles rash.

Papules are up to 1 cm and are circumscribed, elevated, superficial, solid lesions. Examples: elevated nevi, warts, lichen planus. A wheal is a type of papule that is edematous and transitory (Present less than 24 hours). Examples: Hives, sometimes insect bites.

Plaques are larger than 1 cm and are circumscribed, elevated, superficial, solid lesions. Examples: mycosis fungoides, lichen simplex chronicus.

Nodules range to 1 cm and are solid lesions with depth; they may be above, level with, or beneath the skin surface. Examples: nodular secondary or tertiary syphilis, basal cell cancers, xanthomas.

Tumors are larger than 1 cm and are solid lesions with depth; they may be above, level with, or beneath the skin surface. Examples: tumour stage of mycosis fungoides, larger basal cell cancers.

Vesicles range to 1 cm and are circumscribed elevations of the skin containing serous fluid. Examples: early chickenpox, zoster, contact dermatitis.

Bullae are larger than 1 cm and are circumscribed elevations containing serous fluid. Examples: pemphigus, second-degree burns.

Pustules vary in size and are circumscribed elevations of the skin containing purulent fluid. Examples: acne, impetigo.

Petechiae range to 1 cm and are circumscribed deposits of blood or blood pigments. Examples: seen in thrombocytopenia and drug eruptions.

Purpura is a larger than 1 cm circumscribed deposit of blood or blood pigment in the skin. Examples: senile purpura and vasculitis.

## Secondary lesions

Secondary lesions include the following:

Scales are shedding, dead epidermal cells that may be dry or greasy. Examples: dandruff (Greasy), psoriasis (Dry).

Crusts are variously coloured masses of skin exudates. Examples: impetigo, infected dermatitis.

Excoriations are abrasions of the skin, usually superficial and

traumatic. Examples: scratched insect bites, scabies.

Fissures are linear breaks in the skin, sharply defined with abrupt walls. Examples: congenital syphilis, athlete's foot.

Ulcers are irregularly sized and shaped excavations in the skin extending into the dermis or deeper. Examples: stasis ulcers of legs, tertiary syphilis.

Scars are formations of connective tissue replacing tissue lost through injury or disease.

Keloids are hypertrophic scars beyond the borders of the original injury.

Lichenification is a diffuse area of thickening and scaling with resultant increase in the skin lines and markings.

Several combinations of primary and secondary lesions commonly exist on the same patient. Examples: papulosquamous lesions of psoriasis, vesiculopustular lesions in contact dermatitis, and *crusted excoriations* in scabies.

Special Lesions

Some primary lesions, limited to a few skin diseases, can be called *specialized lesions*.

Comedones or blackheads are plugs of whitish or blackish sebaceous and keratinous material lodged in the pilosebaceous follicle, usually seen on the face, chest or on the back, rarely on the upper part of the arms. Example: acne.

Milia are whitish nodules, 1 to 2 mm in diameter, that have no visible opening onto the skin surface. Examples: in healed burn or superficial traumatic sites, healed bullous disease sites, or newborns.

Telangiectasias are dilated superficial blood vessels. Examples: spider hemangiomas, chronic radio dermatitis.

Burrows are very small and short (In scabies) or tortuous and long (In creeping eruption) tunnels in the epidermis. In addition, distinct and often diagnostic changes in the nail plates and the hairs are discussed in the chapters relating to these appendages<sup>[6]</sup>.

### 3.2 Akhlat ke lehaz se Amraz-e-Jild ki Darja bandi (Classification of skin diseases due to Humorous )

#### Amraz-e-Jild Damwi

*Warm-e Phalghamooni* (Phlegmon), *Judaree* (Smallpox), *Dummal* (Furuncle), *Baadeshnaam* (Rosacia), *Tao'on* (Plague), *Anoorisma* (Aneurysm).

#### Amraz-e-Jild Safrawi

*Surkh Baada/Humrah* (Erysipelas), *Namlah* (Herpes zoster), *Hasbah/Khasra* (Measles) etc.

#### Amraz-e-Awrame Balghamiya

*Sala'a/Rasooli* (Tumour), *Khanazeer/kantmala* (Scrofula/Cervical lymphadenitis), *Taaqudeul asab* (Stiffness of Joints), *Tahajjurae-e- Mafasil* (Locking of joints), *Bars Abyaz wa bahqe Abyaz* Leucoderma/Vitiligo.

#### Amraz-e-Jild Saudawiya

*Sartaan* (cancer), *Juzaam* (Leprosy), *Daul-Feel* (Elephantiasis / Filariasis), *Dawali*, (Varicose vein), *Bars wa bahaqe Abyaz*, *Tassaquququl Atraf*.

#### Amraz-e-Awrame with mix Akhlat

*Daus-salab* (Alopecia), *Daul-Hayyah* (Alopecia Furfuracea), *Huzaz* (Lichen), *Qooba* (Ring worm), *Hasaf* (Miliaria Rubra / prickly heat), *Jamra* (Anthrax), *Sqeeroos* (Hard Swelling), *Saleel* (Wart/Verruca), *Irqe madni* (Dracunculosis), *Aakila* (Cancrum), *Jarb wa hikka* (Scabies, Itch ), *Nufaataat wa Nufakhat* (Collection of Pneum).

#### Amraz-e-Awrame with mix Akhlat

*Daus-salab* (Alopecia), *Daul-Hayyah*, (Alopecia Furfuracea), *Huzaz* (Lichen), *Qooba* (Ring worm), *Hasaf*, (Miliaria Rubra / prickly heat), *Jamra* (Anthrax), *Sqeeroos* (Hard Swelling) *Saleel* (Wart/Verruca), *Irqe madni* (Dracunculosis), *Aakila* (Cancrum), *Jarb wa hikka* (Scabies, Itch), *Nufaataat wa Nufakhat* (Collection of Pneum)<sup>[10]</sup>.

#### Amraz-e-Jild ka Usoole Ilaj

##### Tadeel-e-mizaj

*Ilaj bil- zid*: *Mubarridaat* (Refrigerants), *Murattibaat* (Humectant)

*Tanqiya*: *Munzijaat* (Concoctive), *Mushilaat* (Purgative), *Fasd* (Venesection), *Hijamah* (Cupping), *Taaleeqe* (Leeching)

#### Musffiyat-e-dam (blood purifier)

*Mufradat* (Single Drugs)

*Murakkabat* (Compound Drugs)

#### Taqviyat-e- jigar

##### Islah-e-hazam

*Taqviyat* (Strengthening of tabiyat and immuno- modulation)

##### Re-assurance and counseling

*Taqviyat* (Strengthening of tabiyat and immuno- modulation)

##### Re-assurance and counseling

#### 4. Indications of Fasd in Skin Diseases

- *Warm-e phalghamooni* (Phlegmon) *Fasd*, (venesection) same side<sup>[11, 10, 12, 13]</sup>.
- If *Warm-e-phalghamooni* is upper of neck *Akhal/Fasd Haft Andam* (venesection of Median cubital vein)<sup>[14]</sup>.
- If *Warm-e Phalghamooni* is Lower of neck *Fasd Basaleeq /Tannor*
- *Badan* (Venesection of *Basilic vein*)<sup>[14]</sup>.
- *Judaree* with fever (Smallpox) *Fasd* (Venesection)<sup>[13]</sup>.
- *Judaree* (Smallpox) *Fasd Akhal/ Haft Andam* (Venesection of Median cubital vein)<sup>[10]</sup>.
- *Judaree* (smallpox) initial 3 days *Fasd Akhal/ Haft Andam*<sup>[14]</sup>.
- *Nare Farsi Fasd*, (Venesection)<sup>[14, 13]</sup>.
- *Dummal* (Furuncle) *Fasd*, (Venesection) Same side<sup>[10, 12, 11, 13]</sup>.
- *Baadeshnaam* (Rosacia) *Fasd*, (Venesection)<sup>[10, 11, 15]</sup>.
- *Baadeshnaam* (Rosacia) *Fasd, Qeefal, Arnba, Rage beeni*
- *Tao'on* (Plague) *Fasd*, (Venesection) opposite side<sup>[10]</sup>.
- *Banaat-ul-lail /Shara* urticaria *Fasd*, (Venesection)<sup>[15]</sup>.
- *Banaat-ul-lail /Shara* urticaria *Fasd*, (both hand venesection)<sup>[13]</sup>.
- *Banaat-ul-lail /Shara* urticarial all over the body *Fasd Akhal/ Haft Andam* (Venesection of Median cubital vein)<sup>[10]</sup>.
- *Banaat-ul-lail /Shara* urticaria Lower part of body *Fasd Basaleeq /Tannor Badan* (Venesection of *Basilic vein*)<sup>[10]</sup>.
- *Banaat-ul-lail /Shara* urticaria upper part of the body *Fasd Qeefal /Sararoo* (Cephalic vein)<sup>[10]</sup>.
- *Surkh Baada/Humrah* (erysipelas) *Fasd*, (venesection)<sup>[10, 15, 14, 11, 13, 16]</sup>.
- *Mashara* (Facial erysipelas) *Fasd*, (venesection of both hand) & *Safin/Mahfooz rag* (Saphenous vein) some time *Maqain, Manhrain & tahtul-lisan*<sup>[13]</sup>.
- *Namlah* (herpes zoster) *Fasd*, (venesection)<sup>[10, 14, 16, 13]</sup>.
- *Hasbah/Khasra* (measles) *Fasd*, (venesection)<sup>[10]</sup>.

- *Jarb wa hikkah Fasd*, (venesection) <sup>[16, 12]</sup>.
- *Jarb wa hikkah Fasd Akhal/ Haft Andam* (venesection of Median cubital vein) <sup>[14]</sup>.
- *Jarb wa hikkah Fasd Qeefal /Sararoo (Cephalic vein)* <sup>[10]</sup>.
- *Hikkah Fasd*, (venesection) <sup>[15, 13, 14]</sup>.
- *Hasaf Fasd*, (venesection) <sup>[13, 15, 14]</sup>.
- *kalf (freckle) Fasd Qeefal /Sararoo (Cephalic vein)* <sup>[14, 17]</sup>.
- *khailan Fasd*, (venesection) <sup>[15]</sup>
- *Juzam* (leprosy) *Qeefalain, Widajain*, <sup>[10, 18]</sup>.
- *Juzam* (leprosy) *Akhalain* (venesection of Median cubital vein), *Widajain* (Jugular vein) *behind ear, waredul jabha* <sup>[14]</sup>.
- *Barse Aswad Fasd*, (venesection) <sup>[10, 11]</sup>.
- *Bahaq Aswad Fasd*, (venesection) <sup>[15]</sup>.
- *Bahaq Abyaz Fasd*, (venesection) <sup>[13]</sup>.
- *Daa-al-Sa'lab & Daa-al-Hayyah* (Alopecia & Alopecia Furfuracea) *Fasd*, (venesection) <sup>[11, 16]</sup>.
- *Daa-al-Sa'lab & Daa-al-Hayyah* (Alopecia & Alopecia Furfuracea) *Fasd Qeefal /Sararoo (Cephalic vein)* <sup>[10, 17, 13]</sup>.
- *Huzaaz* (Lichen) *Fasd*, (venesection) <sup>[10, 17]</sup>.
- *Sa'fah* (Favus / Prurigo) *Fasd*, (venesection) <sup>[10, 15]</sup>.
- *Sa'fah* (Favus / Prurigo) *Fasd Qeefal /Sararoo (Cephalic vein) Fasd Jabha, Behind Ear* <sup>[12, 16, 17, 14]</sup>.
- *Qoobaa damvi* (Ring worm) *Fasd*, (venesection) <sup>[10, 13, 14]</sup>.
- *Qoobaa safravi* (Ring worm) *Fasd Basaleeq /Tannor Badan* (Venesection of *Basilic vein*) <sup>[13]</sup>.
- Saqeeroos/Waram-e-Sulb (Hard swelling) *Fasd*, (venesection) <sup>[10]</sup>.
- Saqeeroos/Waram-e-Sulb (hard swelling) *Fasd Ibt* (Axillary vein) & *Fasd*, (venesection of both hand) <sup>[13]</sup>.
- *Saaleel* (Warts) *Fasd*, (venesection) <sup>[10, 15]</sup>.
- *Nufatat* (Boil) *Fasd*, (venesection) <sup>[10, 11]</sup>.
- *Khanaazeer/Kanth Maala* (crofula / Cervical lymphadenitis) *Fasd*, (venesection) <sup>[12]</sup>.
- *Khanaazeer/Kanth Maala* (crofula / Cervical lymphadenitis) *Fasd Qeefal /Sararoo (Cephalic vein)* <sup>[12]</sup>.
- *Khanaazeer/Kanth Maala* (crofula / Cervical lymphadenitis) *Fasd Basaleeq /Tannor Badan* (venesection of *Basilic vein*) <sup>[13]</sup>.
- *Khanaazeer/Kanth Maala* (crofula / Cervical lymphadenitis) if lower side *Safin/Mahfooz rag* (Saphenous vein)
- *Sartaan (Cancer) FASD*, (Venesection) <sup>[13, 14]</sup>.

## 5. Conclusion

From above discussion it is quite clear that *FASAD* is an old classical method of treatment in the Unani system of medicine. This method is applied to drains out blood and dominating *Akhlat* mixed with blood from veins. *FASAD* is carried out when the quantity of the blood is excess in the body and patient is either exposed to the risk of developing a disease or has actually developed one. In classical literature of Unani system of medicine, Scholars explained about its indications and procedure. The details of venesection is mentioned in this article is based on classical literature including history, indications, types, amount of blood to be venesected, time, person, procedure, complications and special focus has been made on the number of vessels to be venesected and their benefits with respected to disease and conditions.

## 6. Acknowledgement

This work is completed in Department of Moalajat, Deoband

Unani Medical College, Hospital and Research Centre, Saharanpur U.P and in Jamia Hamdard Higher educational institution in New Delhi, with the support of college Libraries.

## 7. Financial support: Nil

**8. Competing interests:** The author declares that there is no conflict of interests.

## 9. References

1. Begum N, Ansari AA. Venesection (FASD). Hamdard Medicus. 2012; 55(1).
2. Shai A, Maibach HI, brawn R. Handbook of cosmetic skin care U.K.: Informa Healthcare, 2009.
3. Gawkrödger DJ. Dermatology an Illustrated colour text Sheffield, U.K.: Churchill Livingstone, 2002.
4. MD WDJ, MD TGB, MD DME. Andrews' Clinical Dermatology Pennsylvania: Saunders Elsevier, 2006.
5. Baumann L, Saghari S, Edmund, weisberg. Cosmetic dermatology principil and practics: The McGraw-Hill Companies, 2009.
6. Hall JC. Sauer's Manual of Skin Diseases Kansas City, Missouri: Lippincott Williams & Wilkins; 2006.
7. Khan HAM. I'laj-bil-tadbeer. 3rd ed. New Delhi: H.S. offset press New Delhi, 2003.
8. Faiz A, Ali F. Applied Part of Kulliyat with reference to Venesection (Fasd): A Review. International Journal of Research and Analytical Reviews. 2018; 5I(31):583-586.
9. Khanna N. Illusterd Synopsis of dermetalogy and Sexually Transmitted diseases. 3rd ed. Delhi: Peepee Publisher and Distributor (P) Ltd; 2007.
10. Ibn al-Quff AFiMaDYiI[1AD]. Kitab-al-umda fil jaraha New Delhi: Central Council for Research in Unani Medicine. Govt, of India, Ministry of Health & F. W. (Dept. of AYUSH), New Delhi. 2006; 1986.
11. Ibn Sina SaRAAAHiAA[1AD]. Al-qanun fi'l tibb New Delhi: Ejaz Publishing House; 2008.
12. Jurjani SDIiH[1AD]. Zakheera khwarizm shahi Lucknow: Matba Munshi Nawal Kishore; 1903.
13. Tabri AHABM. Almoalajat Buqratiya New Delhi: Central Council For Reserch In Unani Medicine; 1997.
14. Majusi AiA[9AD]. Kamil al-sanaah al-tibbiyya, New Delhi: Idara Kitab al-Shifa, 2010.
15. Azmi WA. Moalajat Amraze-jild wa motalliqat-jild. III ed. New Delhi: National council for promotion of urdu Language, 2015.
16. Baghdadi MaDAaHAiAiAi[1AD]. Kitab al-mukhtarat fil tibb New Delhi: Central Council for Research in Unani Medicine. Govt, of India, Ministry of Health & F. W. (Dept. of AYUSH), 2007.
17. Al-Qamari AaMaHIN[9AD]AH. Ghina muna New Delhi: Centra l Council for Research in Unani Medicine. Govt. of India, Ministry of Health & F. W. (Dept. of AYUSH), 2008.
18. Khan S. Ilaj al-amraz New Delhi: Central Council for Research in Unani Medicine. Govt, of India, Ministry of Health & F. W. (Dept. of AYUSH), 2005.