

Review Article about Eczema (Narfarsi)

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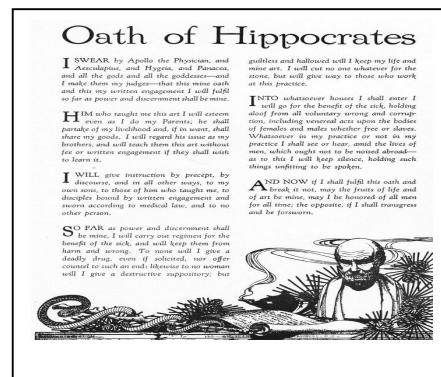
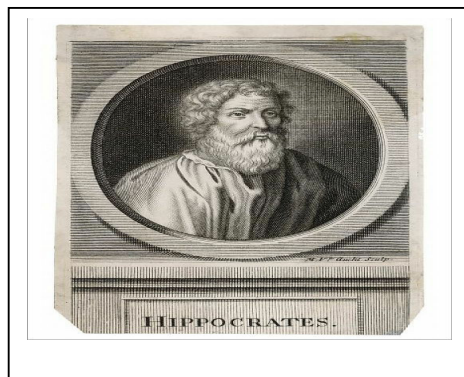
The term Dermatitis is derived from ancient Greek words *derma* means "skin or hide" and *dero* means "to skin or to flay".¹ Greek word *eczema* is literally meant for "Something thrown out by heat," and *ekzein* means "to boil out," (from *ek* "out" + *zein* "to boil"). It is said to have been the name given by ancient physicians to "any fiery pustule on the skin".² The terms 'dermatitis' and 'eczema' are generally regarded as synonymous. Some authors, however, believe in using the term 'dermatitis' to denote all types of cutaneous inflammation, eczema being one distinct pattern of them. Hence, every eczema is dermatitis, but not every dermatitis is eczema.^{3, 4, 5, 6}

Eczema is defined as a catarrhal inflammation of a sensitive skin.⁴ Clinically, eczematous dermatoses are characterized by variable intensity of itching, soreness, and invariable degrees, a range of signs including dryness, erythema, excoriation, exudation, fissuring, hyperkeratosis, lichenification, scaling and vesiculation. Skin diseases induced or aggravated by exposure to substances in work environment are called occupational dermatoses.⁷

Historical perspective

Readily visible alterations of the skin surface have been recognized since the dawn of history, with some being treated, and some not.⁹ Contact dermatitis, an inflammatory skin reaction to direct contact with noxious agents in the environment, was most probably recognized as an entity even in

ancient times, since it must have accompanied mankind throughout history.⁸ The Eber's Papyrus is an Egyptian medical papyrus dating to circa 1550 BC and the oldest preserved medical documents. It contains chapters on skin and eye problems, contraception, diagnosis of pregnancy and other gynaecological matters, intestinal disease and parasites, dentistry and the surgical treatment of abscesses and tumours, bone-setting and burns.¹⁰ In this papyrus, skin diseases with the remedies were placed in the three categories of irritative, exfoliative, and ulcerative disorders.¹¹ *Sushruta Samhita* (सुश्रुतसंहिता) is a Sanskrit text, written by *Sushruta* in 800 BC known as the foundational treatise to Ayurvedic medicine, has innovative chapters on skin diseases and advice *Sravana* (blood-letting) is to be carried out in skin diseases. Charak Samhita written about 600 B.C. also described a complete dermatological disorder including eczema and psoriasis.¹² In 3500 B.C, in Mesopotamia, Sumerian's compiled their medical information in the form of treatise containing all expected human diseases, diagnosis and managements specially skin lesions, venereal diseases, fevers, worms, flukes, and neurology.¹³ Contact dermatitis was first described to plants as long ago as 2000 BC, when an extract of castor oil bean was rubbed into the scalp, as an irritant, to promote hair growth.¹⁴ Infantile eczema was described in the remains of an Indian baby at Utah. **The Greek prejudice against manual labour, as a result of which in some cities, it was illegal for a citizen to ply a manual trade to avoid contact dermatitis. Consequently, medical works tended to concentrate on the afflictions of the citizen rather than of the work force.**¹⁵ Hippocrates (460 -370 B.C.) a great Unani Physician of ancient period described eczema.¹⁶



Galen (131-201A.D) designated a group of skin diseases with hot, painful, reddish swelling, now thought to be streptococcic dermatitis.¹⁷ He noted that the exanthem covered the victim's entire body. The exanthem became rough and scabby where there was no ulceration. He stated that those

who were going to survive developed a black exanthem. According to Galen it was black because of a remnant of blood putrefied in a fever blister that was pustular.¹⁸ The first use of word 'eczema' is not clear, but as eczema, begins as small blisters, these lesions were noted. To the Greeks, these small eruptions made the skin appear to be "bubbling" or "boiling out" hence the word "boil out" or "eczema" was developed.¹⁹

Among Arabic physicians, Ali Ibn Sahl Rabban Al Tabari (838–870 A.D) mentioned that skin colour varies according to the work and occupation of an individual. Further, He said that covering the body also affect the skin accordingly.²⁰ Ali bin Abbas Majoosi (930-994 A.D) mentioned eczematous eruptions as *narfarsi* in description of small pox.²¹ Ibn Sina (980-1030 A.D) have been considered among the most influential medical scholars in history. His contributions included the distinction and careful descriptions of skin troubles also comprised a chapter on eczema.²² Zakariya Razi and Ismail Jurjani, stated that in this skin disease, the liquid filled vesicles appear on the skin with intense burning sensation and itching.^{23, 24}

Ibn Hubal Baghdadi (1122 – 1213A.D) and Ali ibn Sahl Rabban al Tabari in their manuscripts mentioned that ancient Unani scholars had described *narfarsi* and *jamra* as single entity, whereas others discussed them separately.^{20, 25}

Abul Mansoor al Hasan al Qamri also described the details of this disease.²⁶

Ismail Jurjani mentioned that in this skin disease, the liquid filled vesicles appear on the skin with severe burning sensation and itching.²³

Akbar Arzani (1721 A.D) also gave detailed description of this disease.²⁷

Review of literature of medieval and later period discloses that every physician knew this disease though they described it with different name like *narfarsi*, *jamra*, *nimla*, *chajan*, *chambal* etc. *Jamra* and *narfarsi* are two most common names used for this disease.^{25, 28, 29, 30}

After renaissance as the medical science boomed lot of research work were carried out in the form of epidemiological studies and clinical trial to know new treatment modalities and different form of eczema.

The earliest report from plant contact dermatitis comes from writings by Pliny the Younger, in the first century A.D, who described a severe itching from cutting pine trees.³¹

Increased awareness of occupational disease is noticeable from the 1700s and the Industrial Revolution.

Ramazzini (1633-1714 A.D) described fissures on the hands of washerwomen and ulcer on the legs of salt miners.

In England, during the 19th century, there was a revival of interest in occupational dermatoses, with Willan describing dermatitis from shoemaker's wax and Bateman eruption due to lime among builders.³²

Intolerance to individual substances was first described by Bateman 1817 AD.³³

It was interesting to note that the presence of idiosyncrasy was suspected in some cases of contact dermatitis reported in the nineteenth century, many decades before the discovery of allergy by von Pirquet. For instance, in 1829 A.D, Dakin, describing *Rhus* dermatitis, observed that some people suffered from the disease, whereas others did not. He therefore posed the question: "Can it be possible that some peculiar structure of the cuticle or rete mucosum constitutes the idiosyncrasy?"⁸

Atopic eczema was first described by Besnier and Brocq in 1885 and became known in Europe as 'Prurigo Besnier'.³³

In 1847 A.D, Städeler described a method devised to reproduce the lesions provoked by *Anacardium occidentale* (Städeler's blotting paper strip technique) on human skin.³⁴

The history of contact dermatitis in the twentieth century is indistinguishable from the history of patch testing, which is considered the main tool for unmasking the causative chemical culprits.

Josef Jadassohn (1863–1936 A.D) is universally acknowledged as the father of patch testing ("*Funktionelle Hautprüfung*"), a new diagnostic tool offered to dermatologists.³⁵

At the same period (1897 A.D), the pioneering work of Fabre in the field of contact urticaria is emphasized.³⁶

Apart from them major contributors of patch test are Bruno Bloch, Poul Bonnevie Poul Bonnevie, Marion Sulzberger, Alexander Fisher etc.

However concept of allergic contact dermatitis was based on studies by Block, who also introduced the diagnostic patch testing in 1910.³⁷

Landsteiner and Jacobo in 1936 A.D showed in a basic experiment that simple chemicals, capable of causing contact dermatitis must be combined with proteins in order to sensitize. These simple

chemicals are mostly of low molecular weight and form stable compound by reacting with free amino groups of proteins.³⁸

Landsteiner and Chase in 1942 A.D transmitted sensitivity from one guinea pig to another by the use of mononuclear peritoneal exudates from sensitized guinea pigs.³⁹

In 1942 A.D, Hazthausen's transplantation experiment finally proved that allergy is due to a factor supplied to the skin from within.

In 1946 A.D, Chase found that prior feeding with DNCB inhibits subsequent epidermal sensitization to DNCB but not to other substances.⁴⁰ This induced immunological tolerance is called "Sulzberger Chase phenomenon".

A Scandinavian Committee for Standardization of Routine Patch Testing was formed in 1962 A.D. In 1967 A.D, this committee was enlarged, resulting in the formation of the International Contact Dermatitis Research Group (ICDRG). The major task for its members was to standardize at an international level the patch testing procedure, for example, the vehicles used for allergens, the concentration of each allergen, and so on.⁸

In 1973 A.D, Silberberg observed that Langerhans cells of epidermis acted as the antigen presenting cells (APCs) for allergic contact dermatitis.⁴¹

Narfarsi; Unani Concept of eczema:

Synonyms: In *Unani* system of medicine, the eczema is known as "narfarsi," "Chajan" and "Akoota".^{20, 28, 47, 42, 43, 44}

Etymology: According to Ibn Abi Sadiq, this disease is called as *narfarsi* "Faras ki aag" or "Fire of Persia", since it was more common in the kingdom Faras (Persia) or the person who treated this disease for the first time belonged to the city Faras.^{28, 42}

Introduction

Al Quf Masihi described that *jild* (skin) is a network of nervous fibres. The spaces between the network are filled with veins and arteries. The *Quwate hiss* (sensory perception) of the *jild* is because of this network of nerves. The arteries help to maintain the life of the *jild*. *Jild* covers the whole body and it is known as *bashra*. The skin of the different area varies depending upon the need of body.⁴⁵ Ibn Rushd stated that skin covers and protect the body.⁴⁶

Ali ibn Sahl Rabban al Tabari mentioned that skin colour varies according to the work and occupation of an individual. Moreover, He said that the softness and roughness of the skin also depends on the occupation of a person, for example, farmer working in the field possess' rough skin as he is continuously works in the soil, earth and changing air. Likewise, skin of a person who is exposed to the sunlight or lives in forest has changes on the skin depending upon the temperament or climate of the area. Further, He said that covering the body also affect the skin accordingly.²⁰

Narfarsi is a one of the skin diseases with painful eruptions, intense itching and burning on the site of lesion. In addition, lesion ruptures immediately with fast scab formation.^{28, 47}

Ali bin Abbas Majoosi, Muhammad ibn Zakariya Razi and Ismail Jurjani in their respective compilation stated that in this skin disease, the liquid filled vesicles appear on the skin with intense burning sensation and itching.^{21, 23, 24} Ismail Jurjani also mentioned that initially red lines appear at the site of eruption, and this redness is similar to the redness of burns caused by the fire. It is followed by vesicles formation and later they get converted into scales.²³

Majoosi described *narfarsi* under the causes and symptoms of *chachak* (small pox). He explained that if *chachak* is caused by admixture of *sadeed* (pus) and *khoon* (blood) and resembles the vesicles of burns, the condition is known as *narfarsi*.²¹

According to Ibn Sina, both *jamra* and *narfarsi* are the terms used for any kind of *busoors*, or blister or dry scaly skin, accompanied by intense itching and burning sensation. Burning sensation is felt as experienced in burns. Occasionally, the term *narfarsi* is used for *busoors* that are similar to the lesions of *nimla* (herpes), it is progressive in nature and contains fluid.²⁹

Akbar Arzani, and Qamri were of same opinion as Ismail Jurjani and Kabiruddin.^{23, 26, 27, 28}

Ibn Hubal Baghdadi (1122 – 1213 AD) and Ali ibn Sahl Rabban al Tabari in their manuscripts mentioned that ancient Unani scholars had described *narfarsi* and *jamra* as single entity, whereas others discussed them separately.^{20, 25}

Abul Mansoor al Hasan al Qamri stated that *narfarsi* is type of itching, which is accompanied with intolerable burning sensation, later blisters develops, which contains fluid.²⁶

Aetiology (Asbab):

According to Abi Ibn Saddiq, *asbab kharji* (endogenous causes) of *narfarsi* (eczema) are *zoafe aam*, *zoafe asab*, *naqras*, *wajaul mafasil*, *deedan aama*, *amraze meda*, dentition in infants, extreme heat and extreme cold.²⁸ According to Ismail Jurjani, cause of *narfarsi* is *ghalbae wa hiddat khoon*.²³ According to Ghulam Jilani causes of *narfarsi* is general weakness, indigestion, *zoafe asab*, *naqras*, *deedan aama*, extreme heat and extreme cold.⁴⁷ Kauser Chandpuri in 'Mojzul Qanoon' mentioned that cause of *narfarsi* is *ghalbae safra wa kami sauda*.³⁰ Hari Chand Multani mentioned the *ziabetes* as also one of the predisposing factor for *narfarsi*.⁴³ Ali Ibn Majoosi stated that cause of *narfarsi* is *madda damvi*.⁷² Waseem Ahmad Azmi stated that cause of *Narfarsi* can be consumption of diet containing fish, egg, etc., prolong duration of exposure to the sun, extreme cold and warmth.⁴⁹

Some Unani physicians are of the same opinion that following predisposing factors may be responsible for *narfarsi*.

Endogenous Factor (*Asbab Dakhli*):

The *asbab dakhli* of *narfarsi* are *Zoafe aam*, *zoafe asab*, *mixing of safra in dam* (blood), *deedan aama*, *qillate istefragh*, certain diseases such as *nuqras*, *waja-ul-mafasil*, disturbance in menses, and diabetes.

Exogenous Factors (*Asbab Kharji*):

Plastic and rubber material: Hand bag, footwear, watch strap, gloves.

Chemicals and minerals: Soap, polish, hair dye, cream, necklace, lipsticks.

Drugs: Penicillin, formalin, iodine, etc. Occupation: Washer man, hair dresser, farmer, gardener, cook, painter.^{42, 48, 49}

Classification:

In the Classical literature, the *Unani* scholars have classified *narfarsi* (eczema) according to the shape of lesions and presence or absence of fluid in them.

- *Sada narfarsi* (Simple eczema)
- *Surkhymayal narfarsi* (Reddish eczema)
- *Abla dar narfarsi* (Blistering eczema)
- *Mutaqeeh narfarsi* (Pustuler eczema)
- *Sulb narfarsi* (Hard eczema)

- *Shiqaqi narfarsi* (Fissured eczema)



On the basis of severity, further it is classified as *naaa* (acute) and *muzmin* (chronic). In chronic type the pain and burning is less compare to *haad* type.^{28, 47}

Aetiopathogenesis:

Ali bin Rabbani al Tabari described that in this disease *ghilzat* (increased viscosity of *khilt*) develops in the skin along with severe inflammatory condition and erythematous rashes which does not spread into the deeper layers of *jild* rather spreads locally accompanied by severe pain. Therefore, after disappearance of the lesions, its effects remains because of dissolution (*tahleel*) of *raqeeq khilt*, and *ghaleez khilt* remain at the site of lesion.²⁰

Ibn ul Qaf Maseehi (1233-1286 AD) has mentioned *narfarsi* under the heading of *jumra*. He has stated that *narfarsi* is caused by the intermingling of *ghair tabayi safravi* and *saudavi madda* with *ghalba-e safra* (dominance of *safra*).⁴⁵

Ibn Rushd mentioned that there might be imbalance in quantity or quality of the *akhlat* but sometimes kaifiyat may remain the same or sometimes the opposite. There is also a third condition when the *khilt* is not in equilibrium regarding quantity or quality.⁴⁶

Ibn Sina mentioned that diseases are of two kinds, *amraze mufreda* (simple disease) and *amraze murakkaba* (Compound disease). *Amraze mufareda* can be categorised into *sue mizaj* (imbalance of temperament), category of the *sue tarkeeb* (diseases of structure) and diseases which belongs to *tafarruq ittesal* (loss of continuity).^{51, 52}

Ibn Zohr (1092-1162 A.D) said that abscess and *busoors* appear on the skin, when *tabiyat* expel the *khilt* towards the outer layer of the skin. The dry itching is termed as *hikka* while the wet itching is termed as *jarb*.⁵³

Amraze murakkaba are those in which two or more of *Amraze mufareda* combine to form a single disease. But presence of a number of abnormal condition in the form of a single disease for example *warm* (inflammation) or *busoor* (minute eruptions). All the genera of a disease are found in a *warm*. Thus, in it we find the disease of *mizaj*, because no *warm* can take place without *sue mizaj* associated with *madda* (matter). The diseases of form and structure are also found in it, because there is no *warm*, without there being a defect in form and size, and often it is accompanied by disease of position.⁵⁴ Hence, here we can say that *narfarsi* is type of *marz murakkab*, in which lesions such as *busoor* and *warm* are seen.

To understand, how *ghair tabayi akhlat har*, leads to the disease, it is necessary to give a brief description of them.

Khilte Dam

It is the best of all the four varieties of *khilt*. Its *mizaj is har* and *ratab* and it may be either *tabayi* (normal) or *ghair tabayi* (abnormal).

Tabayi khilte dam (Normal blood):

It is red in colour, sweet in taste and free from smell.⁴⁵

Ghair tabayi khilte dam (Abnormal blood) is of two varieties:

1. *Dam*, which has become abnormal through change of temperament such as getting *har* or *barid*.
2. *Dam*, which has turned abnormal from admixture with the *akhlat* derived from (a) Outside and (b) Produced within the *dam*. Thus for example, when a part of blood gets putrefied its lighter portion is converted into *ghair tabayi khilte safra* and the heavier portion into *ghair tabayi khilte sauda* or both of these may retain. The *dam*, which has become abnormal by admixture, varies according to the nature of the admixed material being *balgham*, *safra* or excess of water. *Dam* becomes thick or thin, dark or pale and its odour may change with the type of admixed material or it may become bitter, salty or sour.

Khilte Safra *Safra* is also of two kinds: *Tabayi* (normal) or *Ghair tabayi* (abnormal.)

***Tabayi khilte safra* (Normal bile):**

Khilte safra is like froth in blood. It is bright red in colour, light in weight and *mizaj* is *har*. The hotter it is, the more red is its colour. After production in liver, it divides in two portions: one goes into blood and the other enters gall bladder. The portion which goes with blood is essential for the nutrition of organs such as lungs. It makes blood light and thin for its easier passage through narrow channels of body.

The portion which goes into gall bladder saves body from being polluted from it while at the same time it provides nutrition to gall bladder. Its subsidiary functions are to clean intestines of thick and viscid mucus and to stimulate muscles of intestines and rectum for proper defecation.⁷⁶

***Ghair tabayi khilte safra* (Abnormal bile):**

Abnormal *safra* has two varieties the *safra* mixed with some extraneous material and the *safra*, which has an altered composition. The *safra* which becomes abnormal from admixture with *akhlat* from outside has also two varieties:

(i) The *safra* mixed with *bhalgam* and frequently produced in the liver. This is the better known variety. It is of two kinds (a) The liquid *safra* (b) The thick *safra*. The former is produced by admixture with thin *balgham* and the latter with thick *balgham*.

(ii) The *safra* mixed with *sauda*. This is the less known variety and is termed burnt (outside) *safra*, it originates in two ways, (a) a portion of the *safra* getting burnt remains in it: This is the worst type

of *safra* and (b) *sauda* derived from outside getting mixed with *safra*. This type of *safra* is good. It is often red but not so bright in colour. It resembles with the blood both in colour and appearance and is to be differentiated from it by its thinner consistency.⁵²

Asbabe warm:

Causes of *warm* are related to abnormal types of *madda* (matter) and abnormalities in organs.

Abnormal Madda: These are of six types: *Akhlat arba*, *maaiyat* (watery) and *reeh* (gaseous).

Abnormalities of organ, which causes *warm*, are as follows:

1. Strong expelling power of the excretory organ.
2. Weakness of the recipient organ.
3. Special predisposition for receiving waste matters such as
 - The passage of the recipient organ is wide.
 - The passage way from the recipient organ is narrow.
 - The situation of the organ is low in the body.
 - Weakness of the digestive power of the organ owing to some injury.
 - Cessation of habitual *istefragh*.
 - Smaller size leading to stagnation of nutriment.
 - Amputation of a large organ. The nutrients which were used, there now get accumulated in other organ.
 - Cessation of routine exercise: Lack of dispersion of matter, which is usually dispersed by exercise.
 - *Hararat* of the organ: excessive of innate heat of a tissue as in muscles and acquired heat as from pain, excretion and by using of hot things.

Symptoms (Alamat)

General symptoms (Umoomi Alamat)

According to *Unani* system of medicine this disease is caused due to dominance of *khilte dam* and *khilte safra* i.e., *khilte har*. The signs and symptoms of dominance of *khilte har* are as follows:

Khilte dam (Blood): Signs and symptoms of *dam* being dominant are:

- Heaviness in the body, especially in the base of the eyes, in the head and the temples.
- There is necessarily stretching and yawning
- Fainting and drowsiness senses become disturbed and the reasoning is dull. Fatigue occurs even without any preceding exertion.
- There is a usual sweetness in mouth and the tongue is red. Boils appear frequently in the body and pustules in the mouth.
- Bleeding occurs from the places which are easily may ruptured like nostrils, anus and gums.
- The dreams indicating preponderance of this *khilt* such as seeing red things, excessive flow of blood.

Khilte safra (Bile): Signs and symptoms of dominance of *saфра* are

- Yellow colour of the body and the eyes.
- Bitter taste in the mouth, rough and dry tongue, dryness of nostrils, excess of thirst.
- Feeling of delight in cool breeze.
- Rapid pulse.
- Weak appetite, nausea, bilious vomiting of green and yellow colour, irritative diarrhoea.
- The dreams in which fires and yellow flags are seen. Moreover, the things which are not yellow are seen to be yellow and blaze. Heat, as from a (hot) bath and the sun etc. are seen.⁵²

Alamat khusoosi: (The specific symptoms) of narfarsi are

According to Ibn Abi Sadiq symptoms of *narfarsi* are as follows; site of the lesion will be red, painful with intense burning sensation, itching, appearance of small rashes on third or fourth day, the fluid gets viscous and the vesicle ruptures with formation of scab. Below the scab there is formation of pus. Initially, depending on the severity of the disease high fever will be present.²⁸

Ibn Sina mentioned that the eruptions may appear in smaller size and may be accompanied by less *ufunat* (sepsis).²⁹

Abul Mansoori stated that symptoms of *narfarsi* are itching, intense burning which is intolerable and blisters are formed which contain fluid.²⁶

Hubul Baghdadi stated that the *busoor* of *narfarsi* are filled with fluid, blackish in colour with shiny erythematous base associated with intense and intolerable itching and burning. Sometimes, the lesion can be blackish, dry and scaly.²⁵

Ali ibn Sahl Rabban al Tabari said that *narfarsi* is the disease with deep but not penetrating large *busoor*. Therefore after disappearance of the lesions, its effects remains because of dissolution (*tahleel*) of *raqeeq khilt*, and *ghaleez khilt* remain at the site of lesion accompanied by severe pain.²⁰

Preventive Measures:

People at risk should adopt following preventive measures:

- To avoid working in extreme hot and cold conditions.
- To avoid use of plastic and rubber material such as hand bag, footwear, watch strap, gloves.
- To avoid chemicals and minerals such as soap, polish, hair dye, cream, necklace, lipsticks.
- Washer man, hair dresser, farmer, gardener, cook and painter should have protective clothing.
- To avoid red meat, spicy food etc.

BIBLIOGRAPHY

1. Dermatitis. <http://en.wiktionary.org/wiki/dermatitis>. Last modified on 1 February 2011, at 12:44 [Accessed on 4-1-11]. (31)
2. Eczema. <http://www.etymonline.com/index.php?term=eczema>. © 2001-2011 [Douglas Harper](#). [Accessed on 9-11-11].(32)
3. Burns T, Breathnach S, Cox N, Griffiths C. Rook's Textbook of Dermatology. 8th Edition. Vol I. London: Willey-Blackwell Publication; 2010: 23.1. (33)
4. Valia RG, Valia AR. IADVL Text book and Atlas of dermatology. Vol. 1 Bombay: Bhalani Publication House; 1994:351. (34)
5. Sainani GS. API Text Book of Medicine. Mumbai: Association of physician of India. 2001:1188. (11)

6. Khopkar U, Wadhwas SL. Skin diseases and sexually transmitted infection. 5th Edition. Mumbai: Bhalani Book Depot; 2009:96. (13)
7. Rai R, Ahmed T, Nair KR, Srinivas CR. Occupational Dermatoses among kitchen workers in chain of vegetarian hotels. *Indian J Dermatol.* 2003; 48(3) 151-153 (17)
8. Johansen JD, Frosch PJ, Lepoittevin JP. The Editors. Contact Dermatitis, 5th Edition. New York: Springer Heidelberg Dordrecht; 2011: 1, 204, 288- 291, 831, 833, 838, 964-5. (20)
9. History of Dermatology. http://en.wikipedia.org/wiki/History_of_dermatology. Last modified on 5 March 2011 at 22:26. [Accessed on 12-11-11] (40)
10. Ebers Papyrus. http://en.wikipedia.org/wiki/Ebers_Papyrus. Last modified on 15 July 2011 at 18:54. [Accessed on 29-10-11] (41)
11. Medicine in Ancient Egypt. <http://www.indiana.edu/~ancmed/egypt.HTM>, Last updated: 19 May 2000. [Accessed on 29-10-11] (42)
12. Sushruta <http://en.wikipedia.org/wiki/Sushruta>, last modified on 21 October 2011 at 05:22. [Accessed on 30-10-11] (44)
13. Medicine in Ancient Mesopotamia. <http://www.indiana.edu/~ancmed/meso>. HTM 2010. The Trustees of Indiana University. Last updated: 19 May 2000. [Accessed on 29-10-11]. (45)
14. Mitchell JC, Rook A. Botanical Dermatological: Plants Injurious to the skin. Vancouver: Green grass, 1979: 1-25. (46)
15. Burns T, Breathnach S, Cox N, Griffiths C. Rook's Textbook of Dermatology. 8th Edition. Vol II. London: Willey-Blackwell Publication; 2010: 25.1(48)
16. [Tilles G](#), [Wallach D](#), [Taïeb A](#). Topical therapy of atopic dermatitis: controversies from Hippocrates to topical immunomodulators. [J Am Acad Dermatol.](#) 2007;56(2):295-301.(49)
17. Johnston I. Galen on diseases and symptoms. U K: Cambridge University Press. 2006;55 (50)
18. Galen. <http://en.wikipedia.org/wiki/Galen>. Last modified on 11 November, 2011 at 22:16. [Accessed on 12-11-11]. (51)
19. Eczema. <http://www.etymonline.com/index.php?term=eczema>. © 2001-2011 [Douglas Harper](#). [Accessed on 9-11-11].(32)

20. Tabari ASR. Moalijat Bukratiya. Vol. II. New Delhi: Central Council of Research in Unani Medicine 1997:145, 221.(52)
21. Majoosi AA. Tarjuma Kamilus Sana. Vol. I. Lucknow: Munshi Naval Kishore; 1889:430. (3)
22. History of Medicine. http://en.wikipedia.org/wiki/History_of_medicine. Last modified on 14 October 2011 at 08:39. [Accessed on 30-10-2011] (53)
23. Jurjani I. Zakheerae Khwarzam Shahi (Urdu translation by Khan HH). Vol. VIII. Delhi: Idara Kitabul Shifa; 2009:18.(2)
24. Razi MZ. Kitabul Mansoori. New Delhi: Central Council of Research in Unani Medicine; 1991:273. (4)
25. Baghdadi AH. Kitabul Mukhtarat Fit Tibb. Vol.IV. New Delhi: Central Council of Research in Unani Medicine; 2006: 178.(7)
26. Qamri AMH. Gina Muna. New Delhi: Central Council of Unani Medicine; 2008: 492, 496, (6)
27. Arzani A. Tibbe Akbar. (Mohd Husnain Urdu trans). Deoband: Faisal Publication; YNM:700. (54)
28. Kabiruddin. Tarjumae Kabir (Urdu translation of Sharahe Asbab wa Alamat). Vol. III Hyderabad: Hikmat Book Depot; (YNM): 256-257. (1)
29. Ibn Sina. Al Qanoon Fit Tibb. (Translated by Husnain G). Vol IV. Delhi: Idara Kitabul Shifa; 2007:153. (5)
30. Chandpuri K. Mojzul Qanoon. 2nd Edition. New Delhi: 1909: 441 (55)
31. History of Dermatitis. <http://www.ssw.spookspring.com/Dermatitis/History.html>, [Accessed on 31-10-2011] (56)
32. Rycroft RJG. Occupational diseases of the skin. In. Baxter PJ, Adams PH, Aw TC, et al, the editors. Hunter's Diseases of Occupation. 9th Edition. London: Arnold 2000: 725-37. (57)
33. Epstein N. Atopic Dermatitis. Canadian Family Physician May, 1974:62-66. (58)

34. Städeler J. Über die eigenthümlichen Bestandtheile der Anacardium Früchte. Ann Chemie Pharmacie (About the peculiar constituents of Anacardium fruits. Ann chemistry pharmacy) 1847; 63: 117–165. (59)
35. Adams RM. Profiles of greates in contact dermatitis. I: Josef Jadassohn. Am J Contact Dermat 1993; 4: 58–59. (60)
36. Lachapelle [JM](#). Historical Aspects. [Contact Dermatitis](#) 2011:1-9, DOI: 10.1007/978-3-642-03827-3_1. [Accessed on 26-10-11]. (61)
37. [Hjorth N](#). History of contact dermatitis and its influence on today's occupational dermatology]. [Hautarzt](#). 1980 Nov; 31(11):621-6. <http://www.ncbi.nlm.nih.gov/pubmed/6450193>. [Accessed on 12-11-11] (62)
38. Landsteiner K, Chase MW. Studies on the sensitization of animals with simple chemical compounds II. J Exp Med. 1936; 64:625-639. (63)
39. Landsteiner K, Chase MW. Experiment on transfer of cutaneous sensitivity to simple chemical compounds. Proc Soc Exp Bio Med 1942;49: 688-690. (64)
40. Chase MW. Inhibition of experimental drug allergy by prior feeding of the sensitizing agent. Proc Soc Exp Biol Med 1946; 61:257-9. (65)
41. Silberberg I. Apposition of mononuclear cell to Langerhans cell in contact allergic reaction. An ultrastructural study. Acta Derm Venerol (Stockh) 1973; 53:1. (66)
42. Shagufta A. Amraze Jild. 1st Edition. Aligarh: Saba Publishers, 2002:96-102. (67)
43. Multani H C. Taj ul Hikamat. Lahore: Malik Book Depot; 1995;477-9. (68)
44. Jilani G. Makhzan-ul-Jawaher. New Delhi: Ejaz Publication; 1998:869. (69)
45. Al Qaf Masihi AF. Kitab al Umda Fil Jarahat. New Delhi: Central Council of Research in Unani Medicine; 1986: 20, 22, 151, 153, 175. (70)
46. Ibn Rushd. Kitabul Kulliyat (Urdu translation). New Delhi: CCRUM; 1980:42. (71)
47. Jilani G. Makhzan-e-Hikmat. Vol II 1st Edition. New Delhi: Aijaz Publishing House; 1996 : 293-97. (8)
48. Majoosi AA. Tarjuma Kamilus Sana. Vol. II. Lucknow: Munshi Naval Kishore; 1889: 243. (72)
49. Azmi WA. Moalijat. Vol. IV. New Delhi: National Urdu Development Board; 1997:112-18. (73)

50. Ahmed Z. Moalijat Jild. New Delhi: Nect-E-Zone 2004; 72-89.(74)
51. Ibn Sina. Al Qanun. Book I. New Delhi: Jamia Hamdard; 1993: 199, 120. (75)
52. Shah MH. The general principles of Avicenna's Canon of Medicine. Vol. I. 2nd Edition. New Delhi: Idare Kitabus Shifa; 2007: 37, 39, 40, 204-5, 228-9. (76)
53. Ibn Zohr AM. Kitabul Taisir. New Delhi: Central Council of Research in Unani Medicine; 1986:193-4.(77)
54. Ibn Sina. Al Qanun. Book I. New Delhi: Jamia Hamdard; 1993: 101.(78)