



POSSIBILITIES AND OPPORTUNITIES OF UNANI MEDICINE IN ARCTIC COUNTRIES: A REVIEW

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ABSTRACT

Arctic countries have been always the area of interest for medical and health related research for scientists from all over the world. This paper discusses the possibilities and opportunities of Unani medicine in Arctic countries through its different modes of treatment viz Dietotherapy, Pharmacotherapy and regimental therapy, following a literature survey through classical Unani Texts, key word searches through Internet, Research studies done in RRIUM Srinagar related to cold climatic ailments, information collected from Kashmiri peoples (because the climatic condition of Kashmir is much similar to climatic condition of Arctic countries).

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Introduction

In Unani medicine, the word "Unani" is the Arabicized form of "Ionian," which means "Unani" or "Greek." It is also called wisdom and sometimes simply "Unani." The origin of Unani medicine as a form of treatment lies in Arabic and Persian literature, and its basic theory is based on the composition of the four elements: *Balgham* (Phlegm), *Dam* (Blood), *Şafrā* (Bile), and *Sawdā* (Melancholy), which form the basis of the human body and the different temperaments formed from the amalgamation of these humors. Therefore, when these mixtures remain in moderation, the temperament of a person also remains moderate, thus maintaining health. However, when these humors deviate from

moderation due to internal or external influences, the temperament of the human body deviates from normal, causing disease. Various procedures are provided by Unani medicine to bring this imbalance to moderation, which is named as treatment administered by a doctor. The human body carries within itself a healing power, known as immunity in modern medicine.

Galen (*Jalīnūs*, 131-200 AD) was the last physician of Greece. After the emergence of Islam, the renaissance of this art took place through Prophetic medicine. Gradually, medical books were translated from Syriac, Hebrew, and Unani into Arabic. Unani medicine was taught, and hospitals were started, thus making the

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practice of Unani medicine common. This credit is attributed to the heads of the *hakeems*, namely *Jibreel bin Bakhtishu*, *Hunain bin Ishaq*, *Yohanna bin Masuyah*, *Ali bin Raban Tabri*, *Jabir bin Hayyan*, *Zakariya Razi*, *Sabit bin Qara*, *Abu Sahl Masihi*, *Jurjani*, *Abul Qasim Zahrawi*, *Ibn al-Haytham*, *Abu Ali Sina*, *Zain-al-Din Jarjani*, *Ibn Baitar*, and *Dawood Antaki*, among others.

There are three methods of treatment:

- Treatment with food ('*Ilājbi'l Ghidhā'*/Dietotherapy)
- Treatment with medicine ('*Ilājbi'l Dawā'*/pharmacotherapy)
- Treatment with moderation and alteration in six essential factors ('*Ilājbi'l Tadbir'*/Regimental therapy)

Geographical Presentation of Arctic Countries:

In Unani medicine, treatment varies according to each season and various regions. Early and late *Hakīms* have formulated different principles and laws based on changes in climate. Measures of hygiene, as well as laws regarding medicine and diet, have been explained in terms of traveling to cold countries and places where the temperature is below zero degrees. There are many definitions of the Arctic region. Generally, all areas in north of the Arctic Circle (66.33 N latitude) are considered in this region. (1) In this region, summer is cold, and winter is extremely cold. The average temperature in winter is minus 37 degrees Celsius and the minimum temperature has been recorded as minus 68 degrees Celsius. (1) The temperature here ranges from 20 degrees Fahrenheit to 50 degrees Fahrenheit, and in many places the temperature drops below the freezing point. Autumn is harsh and long. The summer lasts for a very short time. Rainfall is less, but snowfall is frequent. (3) *Ismail Jurjani's* collection in *Khawarzam Shahi* has signs and scales that the dispositions to accept the cold are not the same as those of the disposition to reject or accept the moistness because all Cold temperament accept the coldness relatively and quickly and the disposition to accept the dryness, moistness is different from the cold to hot temperament. (10)

As per Ibn Sina: Persons who go to live in cold countries become robust and stronger, and bolder and courageous. The digestion improves. If the climate is also damp the people will become obese and fleshy and coarse. The veins will not show under the skin of the hands, and the joints are indistinct in outline. The body becomes pale and delicate. (17)

Cold atmosphere. This drives the innate heat into the interior organs, unless the air has sufficient driving force itself to penetrate them. Cold atmosphere does not interfere much with the circulation of the humours or imprison them. But it favours catarrh and has a weakening effect on the nerves. It has a highly detrimental effect on the trachea. If the atmosphere is not so cold, it strengthens the digestion and all the interior functions, and improves the appetite. On the one hand it is more beneficial to a healthy person than a very hot atmosphere, and on the other hand it is detrimental to nerve- function. It closes the pores and causes matters from within the bones to pass outwards to the surface. (17) The temperament of winter season is cold and wet (15)

Residence in northerly countries: Persons who live in the north resemble in character those who live in cold countries with cold seasons. Likewise, Kashmir valley and Ladakh in India has some resemblance with north pole countries. Diseases of expression" and those due to confinement of the humours in the interior parts (*Amraz al-haqqaan wa al-asr*) are liable to occur. Digestion is usually good. Such individuals have long life span. In cold countries where humours are confined to interior parts of body; regimens and drugs which can help to remove them from body may be helpful.

The following diseases occur in arctic countries due to cold climate and cold weather conditions:

Intefākh al-Asabe(Frost Bite) (2)

Nazla wa Zukām (Cold and Coryza)

Shara Balghami (Cold Urticaria)

Diq wa Sil (Tuberculosis)

Scarbiut (Scurvy)

Zā-tur-riya (Pneumonia)

Zeequn nafas (Asthma)

Zātul Janb (Pleurisy)

Iltehāb-e-Kulliya (Nephritis)(3)

Ismail Jurjani writes that *Sil wa Diq* (Tuberculosis), *Warm-e-Sho'abatur Riya* (Bronchitis), *Amraz-e-Riya* (Diseases of Lung), *Qooba* (fungal Infections) *Zukām* (Coryza) and *Nazla* (Cold) are common in such areas. (10)

In the winter season the commonly occurring disorders are *Zat al-Janb* (Pleurisy), *Zat al-Ri'a* (Pneumonia), *Zukam* (Coryza), *Hikka* (Pruritus), *Bahuha* (Hoarsness) *Su'al* (Cough), *Waja al-Janbayn* (pain in flanks), *Waja al-Qatan* (Low backache), *Suda* (Headache), *Saktaat* (Unconsciousness), *Sadr* (Vertigo).(16)

Ilājbi'l Ghidhā'

(Potential for dietary treatment in Arctic countries)

Hot drinks like tea, saffron kahwa, coffee, and green tea are useful for the residents of such a place. In addition, the use of meat, especially chicken meat, is beneficial as it produces blood with good quality. Its pigment is a powerful solvent that dissolves impurities and acts as a deobstruent. It also serves as anti-flatulent and antispasmodic. Its oil soothes joint pain caused by cold. (4)

Shaykh al-Rais mentioned in the Canon of Medicine that people should have a high-calorie diet in the winter season. If it is due to temperament disturbance, then one should increase the amount of exercise and reduce the food intake. It is obligatory to take such wheat in the diet and the stickiness in its flour is more compared to the wheat that is eaten in summer, and the same is the case with roasted meat. Avoid beetroot (*Beta vulgaris* L.), *karafs* (*Apium graveolens* L.), *batuwa* (*Chenopodium album*), *cholai* (*Amaranthus*), *khurfa* (*Portulaca oleracea* L.), *kasni* (*Cichorium intybus*). Joint diseases should be treated immediately. Immunity is strong in winters, that is why people in these

regions are generally healthy and have sound bodies. (5)

The use of oily substances orally and locally is beneficial in such climatic situation to fight with dryness and coldness.

Buqrat (Hippocrates) says that a person food intake gets increases in cold season. A person should use meat of pigeon, chicken, sparrow, lamb, vegetables, spices and other hot eatables in cold seasons. (14)

The bread should be made heavier in winter than in summer. The same applies to flesh-meat, roasted meat, and the like. Potherbs: take cabbage, beet, celery. Avoid orach, red barley, purslane, endive.

Medical importance of cold water and ice:

Cold water: Drinking cold water is most important and most useful in all severe fevers. (2)

Ice: Its great advantage in treatment is that if it is placed on the stomach of a patient with high fever, the fever will go away or it will be reduced. One of the main benefits of ice in treatment is that placing it on the site of acute pain provides relief. Therefore, its use on cancer is a good treatment to alleviate its pain. Placing ice on the stops the bleeding. A Person who has ingested a hot-temperament poison should be provided with ice to consume, and applying ice on a scorpion sting provides great comfort. In the case of cholera putting ice on the patient's stomach is a cure for all their ailments. (2)

Some foods recommended for such regions by Unani physicians;

1. Chicken meat
2. Murghabi meat (A type of Duck)
3. Murabba Amla to treat Vit C Deficiency
4. Mango Pickels for Vitamins
5. Roghane Kalonji (*Nigella Sativa* Linn oil) orally as Muhallil (*Resolvent*) in cases of obesity. The steam bath (Hamame bukhari) is beneficial in all types of hypo and hyper lipidemias.
6. Wax bath (*Hammam Moomi*) for treatment of skin diseases in which skin becomes dry.

Ilājbī'l Dawā':**(Possibilities of Medicinal treatment in Arctic Countries):**

Before discussing the above topic, it is best to first find out which herbs grow in that area.

Foraging wild herbs is a forgotten skill, which is now very much in trend in Finland. Many restaurants use wild herbs in their dishes, and consumers are starting to value the health, taste and quality aspects of the organic and local food that nature has to offer. Wild herbs have traditionally been used in Finland also for medicinal purposes or folk magic.

The folk medicine tradition in Finland is exceptionally rich, mainly based on sauna, massages, cupping, bone setting, and medicinal wild herbs. Elias Lönnrot was the first one to collect information about the Finnish healing methods and traditional medicinal plants. He gathered information about plants, determined the nutritional and medicinal value of such herbs, and published it under the title "Flora Fennica" in 1860. The medicinal values of wild plants, berries, and mushrooms are still a much-researched subject of interest. (5)

Introducing 6 common wild herbs in Finland:

1. Stinging nettle
2. Dandelion
3. Juniper
4. Heather
5. Goutweed
6. Birch

***Urtica dioica* (Stinging nettle)**

One of the easiest and versatile ingredients growing wild in the Finnish nature is the stinging nettle. The stinging nettle is known as nature's own spinach due to protein and fibres it contains. It has a variety of nutrients such as vitamins, minerals, fatty acids, amino acids, and polyphenols, many of which also act as antioxidants. It is especially rich in calcium, which is useful for a vegetarian diet. Stinging nettle might lower blood pressure, raise blood antioxidant levels, and reduce inflammation. It has been used to remove mucus. Nettle has also been thought to have curative effects on prostate enlargement as it increases the need to urinate. (5)

***Taraxacum officinale* (Dandelion)**

Many people think dandelion is a weed, which is not welcome in a garden or yard. But dandelion is, in fact, rich in carotene, which is beneficial to health, as well as vitamins B, C and D. Dandelion leaves contain about three times the amount of nutrients compared to other lettuce plants. Another good thing is, that it contains less nitrates than regular lettuce. According to some studies, dandelion also has a curative effect on various inflammations, and it lowers blood pressure and blood sugar levels. Dandelion also known as Herba Urinaria.

Young dandelion leaves from early summer, and preferable from shadowy place, are typically used in salads, but dried dandelion root has also been used as a coffee substitute. Even flowers and buds could be used blanched, but Dandelion has some bitterness, which limits the use. Dandelion is common in many grass areas, but I would recommend avoiding foraging the leaves from parks or pathways, where animals such as Doggy Urinaria might wander. Dandelion is a common wild herb in Finland. (5)

***Juniperus communis* (Juniper)**

Juniper berries are believed to increase the secretion of urine, sweat, stomach and intestinal fluids, and lower blood pressure. It can potentially increase the secretion of glands in the bronchi, trigger various cramps, reduce

flatulence, treat wounds, and reduce the growth of bacteria, viruses, and molds. Juniper has also been found to have invigorating effects. It potentially lowers blood sugar levels, increases superficial blood circulation, and may also relieve rheumatism problems. A person with kidney problems should not use juniper. From juniper second year old berries are typically used dried, and young shoots 10 dried-are good fresh for herbal tea or dried as a spice. I like to use 5 juniper berries in a venison stew, and juniper branches are good with smoking fish. Remember, that everyman's rights typically permit berry picking, but they don't allow collecting branches from trees, and you always need landowner's permission for that. (5)

***Calluna vulgaris* heather (Juniper berries)**



Delicate heather flowers have been traditionally used as an herbal tea to try to treat insomnia and reduce the number of bacteria and viruses. Heather may also relieve rheumatism, urinary stones and digestion. Heather flowers bloom in August. Mixing some heather flowers with wild raspberry leaves makes a tasty evening tea, which can help for example during period pain. A good rule of thumb for the use of wild raspberries is, that the leaves are best during the first year of growth, and berries can be picked on the second year from the same location. It resembles with *Abhal* (Juniperus Sabina linn) described in Unani Medicine, Which is a diuretic and emenagogue drug. (5)

***Aegopodium podagraria* (Goutweed)**

Goutweed is a ground elder, which was formerly used to treat gout. It's very common and even invasive plant found in gardens and side of forest roads, fields, and streams. Goutweed is one of the first wild herbs that can be foraged in spring. Goutweed's young leaves can be used for salads and soups in spring from April to May. It can also be frozen or dried. The leaves contain iron and vitamin C. The plant blooms in Finland from June to August, and it's not recommended to be used in salads mid or late summer as it takes on a tangy taste and has a laxative effect. Goutweed should not be mix with *Aethusacynapium*, *Conium maculatum*, and *Cicutavirosa*, which are all very poisonous. Goutweed resembles most *Angelica sylvestris*, which is harmless. Best way to identify goutweed is to follow it during the first year until it blooms and forage the young leaves on the next year when the plant has been previously identified. (5)

***Aegopodium podagraria* (Wild herb)**

(*Betula pendula* and *Betula pubescens*) Birch moments before the leaves start growing, birch trees provide birch sap, which moves inside the tree. It's clear liquid that can be consumed fresh from the tree. If you are ever in any Finnish survival show in the spring, remember that the birch is like a coconut during about one month a year. Birch sap collection is done by drilling a hole into the tree trunk and leading the sap into a container by some tube. Birch effectively removes excess fluid and swelling from the body, and it is therefore well suited for those with unnecessarily high blood pressure. Birch has also been used for kidney and urinary infections and for the treatment of gout and rheumatism. Birch also contains an essential oil that prevents inflammation, and buds are stronger than leaves but the resin they contain can irritate the kidneys. It resembles *Atrilal* (*Ammi Majus* Linn) in Unani Medicine. (5)

Wild herbs in Finland

Birch sugar, also known as xylitol, is made from birch and used in many candies in Finland. Xylitol and Stevia are both low GI natural sugar

substitutes, low in calories. Xylitol, unlike Stevia, has proven health benefits, thus making it far superior to all other natural sugar alternatives. It's especially good for your teeth. Xylitol is, however, extremely dangerous for dogs, so never allow pets to eat any xylitol candy or chewing gum. Small newly opened birch leaves in spring are edible and can be used in herbal teas, salads, sandwiches, or soups, sauces and stews like any fresh herbs. The birch leaves contain plenty of vitamin C. People with low blood pressure and diabetics should be careful with birch. Externally birch leaves are used in the sauna to whip yourself to improve blood circulation and stimulate the skin. The aroma of the wet birch leaves is part of the Finnish sauna experience. Birch is also good ingredient in shampoos. Remember that for collecting birch leaves or branches, you always need landowner's permission. Damaging any plants or trees is not allowed by the otherwise generous everyman's rights. (5)

***Adiantum capillus veneris* (Parsiaonshan), Pakhan Bed (*Bergenia ciliata*).**

Some drugs which are considered as high-altitude plants i.e *Adiantum capillus veneris* (*Parsiaonshan*), Pakhan Bed (*Bergenia ciliata*) and cultivated in Kashmir Valley, which has much similar environmental condition with arctic countries. (5)

How to avail this plant in Arctic Countries:

These plants may be cultivated there in collaboration with Agricultural department or may be imported from Kashmir Valley. As there are some favourable conditions in Finland and in Siberia for cultivation of herbs as discussed earlier.

***Adiantum capillus veneris* (Parsiaonshan)**

Scientific classification

Kingdom:	Plantae
Clade:	Tracheophytes
Division:	Polypodiophyta
Class:	Polypodiopsida
Order:	Polypodiales

Family:	Pteridaceae
Genus:	<i>Adiantum</i>
Species:	<i>A. capillus-veneris</i>

Binomial name

Adiantum capillus-veneris L. (11)

Adiantum capillus-veneris, the Southern maidenhair fern, black maidenhair fern, maidenhair fern, and Venus hair fern, is a species of ferns in the genus *Adiantum* and the family Pteridaceae with a subcosmopolitan worldwide distribution. It is cultivated as a popular garden fern and houseplant.

Distribution

Adiantum capillus-veneris is native to the southern half of the United States from California to the Atlantic coast, through Mexico and Central America, to South America. It is also native to Eurasia, and Australasia. There are two disjunct occurrences in the northern part of North America: at Cascade Springs in the Black Hills of South Dakota and Fairmont Hot Springs, British Columbia. In both instances, the warm microclimate created by hot mineral springs permits the growth of the plant far north of its normal range. It is similar in Zvonce spa resort (Звоначка Бања, Zvonačka Banja), near Pirot in Serbia, where hot mineral springs provide adequate heat and humidity for the survival of this species. It is found in temperate climates from warm-temperate to tropical, where the moisture content is high but not saturating, in the moist, well-drained sand, loam or limestone of many habitats, including rainforests, shrub and woodlands, broadleaf and coniferous forests, and desert cliff seeps, and springs. It often may be seen growing on moist, sheltered and shaded sandstone or limestone formations, generally south-facing in the southern hemisphere, north-facing in the north, or in gorges. It occurs throughout Africa in moist places by streams. On moist sandstone cliffs it grows in full or partial shade, even when unprotected. (11)

Description

Adiantum capillus-veneris grows from 6 to 12 in (15 to 30 cm) in height; its fronds arising in clusters from creeping rhizomes 8 to 27.5 in (20 to 70 cm) tall, with very delicate, light green fronds much subdivided into pinnae 0.2 to 0.4 in (5 to 10 mm) long and broad; the frond rachis is black and wiry.[5][7]

Cultivation

Adiantum capillus-veneris is cultivated and widely available around the world for planting in natural landscape native plants and traditional shade gardens, for outdoor container gardens, and as an indoor houseplant.

Adiantum mairisii is a winter hardy hybrid of *Adiantum capillus-veneris* with another species, which is likely to be one of *Adiantum raddianum*, *Adiantum aethiopicum*, or *Adiantum cuneatum*. As a houseplant, *Adiantum capillus-veneris* requires filtered light and very humid conditions. It should be grown in soil rich in organic matter and should be watered frequently but lightly, to keep the roots damp but not drenched. The temperature should not fall below 12 °C (54 °F). It is propagated by dividing, making sure each clump has a section of rhizome. (11)

Conservation

The fern is listed as an endangered species in North Carolina (as southern maidenhair-fern) and threatened species in Kentucky (as venus hair fern), due to loss of Appalachian habitat. (11)

Traditional uses

This plant is used medicinally by Native Americans. The Mahuna people use the plant internally for rheumatism, and the Navajo people of Kayenta, AZ use an infusion of the plant as a lotion for bumblebee and centipede stings. The Navajo people also smoke it or take it internally to treat mental illness.

In the traditional medicine of Iran, frond infusion of *Adiantum capillus-veneris* is used for jaundice therapy. Along with this, they have a wide range

of medicinal uses and have been used to treat coughs, cold, and to aid in kidney function. (11)

Bergenia ciliata* (Pakhan Bed)**Bergenia ciliata*****Scientific classification**

Kingdom:	Plantae
Clade:	Tracheophytes
Clade:	Angiosperms
Clade:	Eudicots
Order:	Saxifragales
Family:	Saxifragaceae
Genus:	<i>Bergenia</i>
Species:	<i>B. ciliata</i>

Binomial name

Bergenia ciliata (12) (Haw.)

Sternb. Revis. Saxifrag. suppl. 2:2. 1831

Bergenia ciliata (fringed elephant's ears, winter begonia, hairy bergenia, Hindi & Sanskrit : *Pashanbheda*) is a plant species in the genus *Bergenia*, deciduous in USDA Zones 5 to 7, but usually remain semi-evergreen south of Zone 7. It is found in Northern India in Uttarakhand (Chamoli and other districts of Uttarakhand) and Himachal Pradesh (in district Shimla). This flower is related to the famous Phool Dei Festival (<https://www.tourmyindia.com/states/uttarakhand/phool-dei-festival.html>) celebrated in Uttarakhand. It is commonly known in India as Pathar phor buti. Also found in mountain areas of West Bengal, like Kalimpong, and Darjeeling. Afghanistan, south Tibet, Bergenin, catechin, gallic acid, gallicin, catechin-7-O-glucoside and β -sitosterol can be found in *B. ciliata*. It is known for its use in Ayurveda and other medicinal properties. It is mainly found on rocks, and it grows in the month of February and March. It is a highly cited medicinal plant in the Himalayan state of Sikkim located in Northeastern India. (6)

The plant is harvested from the wild for use as a medicine and sometimes also for food. *Bergenia*

ciliata growing on the trail to Kareri lake in Himachal Pradesh, India. (12)

Unani Treatment of Some diseases due to Cold weather:

Chilblains; Erythema pernio (*Intefakh al-Asabi*)

It occurs on fingers as red, itching lesions may be associated with edema. Due to severe and constant exposure to cold, the skin of sensitive people becomes scaly, the arterioles constrict while the capillaries dilate. Therefore, there is a decrease in blood flow. Hemoglobin is completely deoxygenated. More than that due to edema there is lack of fluid in capillaries cause so the wastes get trapped inside soon. (6)

Cause:

Congestion of waste matter inside fingers due to the cold, the pores become constricted, due to which the substance cannot be dissolved, mostly people with bilious temperament are affected.

Symptoms: Possible in people of all sexes, middle-aged women are more affected

Principles of treatment:

- Apply heat locally.
- Avoid cold places and cold objects.

Congenital disorder

Ichthyosis and exfoliation

Essentials of diagnosis

- Dryness roughness and scaling of the skin
- aggravated in the cold of winter, clearing up when the weather becomes warmer
- scaling and erythema over large area of the body

In this disease, the skin of the body becomes hard, rough and scaly, it usually does not itch, but if the condition is severe, itch occurs. It usually starts at the age of one to four years. And with time and age, it gets severe, the treatment is the same, because there is *taqashshuff* (flaking) and

taqshar (Scaling), so try to bring coolness. Use Marhame Qooba locally in these cases.(6)

Chapped hands and chapped lips (*Shuqooq Jild wa atraf wa shafat*)

In this disease, the skin of hands, feet, face or lips are torn, which causes severe pain. Sometimes they start bleeding. This condition occurs in the skin of any part of the body, but in general exposed parts of the body that are exposed to external influences such as hands, feet, face and lips are prone to cracking. The reason for this is extreme cold, and toxicity in blood. Since dryness is also present in this disease, so try to provide moisture. The patient should be kept away from severe cold, i.e. heat should be applied to him. Use *Takmeed Har* (Hot fomentation) in these cases. *Roghane Gul*, *Roghane Moom*, *Butter*, *Roghane Babuna* are useful locally in this case.(6)

Rosacea (*Acnerosacea*) & *Badshanam* (*Erythema*)

Essentials of diagnosis:

- commonly middle age group usually after 30 years are affected
- distribution on Central part of face
- Seborrhoeic skin
- redness, Telangiectasia, without black heads

Use Zamade Jalinus, Marham Raal etc in this case locally.

Erythema

Erythema is an ill-defined red rash that usually occurs on the face or may also appear on exposed parts of the body such as the neck, hands, feet, or legs. It is a chronic disease that usually affects middle-aged people or in debilitated people. Severity increases in extreme heat. During the cold season, it is intense. This redness is similar to the red color of leprosy. In the treatment, it is necessary to provide heat and avoid cold places.(6)

Quba-e Qadmain (*Tinea pedis*)

Usually occurs between the toes or sometimes

between the fingers. The affected skin is usually thick and red, itchy and cracks when severe. The skin of the sole is the most affected, usually it is limited for months and years. We can apply Marhame Kafur and Marhame Qooba in this ailment locally. (6)

Unani Treatment:

Roghan Halba (Fenugreek oil) 35 ml put in the mouth for 15 minutes.

Shahatra (Fumaria officinalis) 5 gm, *Chirata (Swertia chirata)*, *Ushba e Maghribi (Smilax Medica)* each 3gm, *Sarphuka (Tephrosia purpurea)*, *Mundi (Sphaeranthus indicus)*, *Barge Jhao (Tamarix gallica)*, *Gul e surkh (Rosa damascena)* each 4 gm, *Haleela Siyah (Terminalia chebula)* 5 No, Decoction of the above drugs may be prepared and useful in above said ailment. (6)

Akila (Gangrene)

This type of condition occurs when severe cold is applied to the skin and the swelling occurred in foot. *Akila* is actually a kind of hypothermia in which the organs begin to deteriorate.

Local wound should be cleaned with antiseptics. *Kachcha Papita* (Raw Papaya) crushed will applied on such lesions and do the daily dressings after proper wash with betadine and antiseptic solutions.

Munbit lahem Advia (Muscle growing drugs) are useful locally in this ailment like *marhame Ral* and *Marhame Zingar*. (6)

Regimenal therapy (Ilaj-Bit-Tadbeer)

Living in cold areas always brings coldness in the body therefore we can propose Musakhkhinat (in the form of regimens as well as dietary supplements)

- *Hammam* (Turkish Bath)
- *Tadheen* with oil having hot temperament.
- Use of *Dalk* (massage)

- *Riyaazat* (Exercise)
- *Abzan* (Sitz Bath)
- *Pashoya* (Foot Bath)
- *Inkebab* (Inhalation of medicated steam)
- *Nutool* (Irrigation)
- Local Steam (*Hammam e Bukhari*)
- Leeching (*Irsale Alaq*)
- *Mehjima Nariya* (Fire Cupping)
- *Hijamah Bila Shart* (Dry Cupping)
- *Hijamah Bish Shart* (Wet Cupping)
- *Qutoor* (Dropping)
- *Hammame Shamsi* (Sun Bath)
- *Ishal* (Purgation)
- Hot Fomentation (*Takmeed Har*)

Buroodat always brings stagnation in body humours; we can propose munzij Mushil therapy, cupping for evacuation of morbid matter. The cold air is the worst for pulmonary organs. In this season the cold affects the head, and a large amount of phlegm is produced in the head leading to several head related disorders. In these cases, Munzij Mushil Therapy, Hammam, Dalk to produce heat in the body may be prescribed. Riyazat may also be advocated. Nutool for head disorders. (17)

Hijamah:

Mahjima Nariya with massage (Massage with Roghane Babuna or Roghane Dafli, because these oils are having Muhallil resolvent properties) may be beneficial in cases of joint pain and Sciatica. (13)

The repletion (kasrat al-imtala) with, and the lack of dispersion of the humours (kilat ul-tahalul) predisposes to epistaxis and rupture of varicose veins. Ulcers readily heal owing to the vigour of the body and the purity of the blood, the external conditions are also favourable to healing, because there is nothing to relax or moisten tissues. The fact that the innate heat is plentiful in such

people prevents epilepsy from occurring, but if fits should occur, they will be correspondingly severe, for it would have to be a very powerful agent to bring such fits at all in these regions. Hijamah may be advocated in such cases. (17)

Abzan (Sitz Bath)

Effect on the female sex. Menstruation is defective owing to constriction of the channels and the absence of the stimulus to menstrual flow and to relaxation of the channels. Abzan may be indicated in such cases. Some assert that this makes the women sterile; that their wombs do not open. But this is contrary to experience; at any rate as regards the Germans [Turks, Parthians-in other readings]. The great amount of innate heat makes up for the absence of the stimulus to flow and to dilate the channels. Abortion, it is said, is rare amongst women in these climates, and this fact further supports the opinion that their vitality is great. Parturition is not easy because the organs in question remain hard and will not open easily. The milk will be scanty and thick, because the cold prevents the blood from flowing easily enough to the breasts. (17)

Hammam and Massage:

Abul Hasan Ali Ibne Raban Tabri wrote in his treatise that the person living in cold regions should take Hammam and Massage with Hot Oils. (14)

Riyazat and Ta'areeq:(Exercise and sweating)

Ibn Sina has advocated for WINTER. There should be plenty of physical work. Eat liberally, if the prevailing wind is northerly. If southerly, increase the exercise but diminish the amount of food. (17)

In such countries *Riyazat Muhallilah* may be performed with the help of games like Basketball, in which there will be continuous and rapid movement lead to sweating and evacuation of morbid matters. Sweating may occur with the help of steam bath (*Hammam Bukhari*).

Purgation:

When the body is healthy, illnesses are unlikely to come on during the winter Should they do so, however, the appropriate treatment should be used, including **purgation** if that is necessary. Illness will only arise under strong provocation, the agents being usually of a "hot" quality. The reason is that the innate heat, which is the determining factor, is very strong during the winter, because the cold prevents its dissipation, and collects it among the interior organs. Furthermore, all the vegetative faculties are more efficient at this season. (2)

Role of regimental therapy in frost bite (*Bard-e-Atraf*):

Frostbite is a freezing, cold thermal injury, which occurs when tissues are exposed to temperatures below their freezing point for a sustained period of times. Frostbite is commonly found in countries with extreme cold climate and mostly found in military. Now a day's frostbite is found in people associated with winter sports like skiing, hiking, ice climbing. There on directly damaging the cell. Causing intracellular dehydration, intracellular electrolyte concentration increases dramatically initiating cell death. Due to continuous fall in tissue temperature, there is formation of intracellular ice crystals and later theses ice crystals expand leading to mechanical deterioration of cells. However, a study in Kashmir valley revealing efficacy of leeching in frostbite, showed outstanding results in the treatment of all forms of frostbite with very low recurrence rate. (2)

However, it is important to set up a proper lab bank for leeches where Standard operating procedures (SOPs) are followed. Adequate care should be taken for the survival of the leech. The principle of evacuation of morbid matters should be followed. Otherwise, the leeches will not survive, and the evacuation will not be possible in such cold countries. (2)

A paste of Neem (*Azadirachta Indica*), Haldi (Turmeric) and chinar (*Platanus orientalis*) is also beneficial in cases of frost bite if used locally.

2 Akbar Arzani in his book *Iksir ul-Qulab Mufarah ul-Qulab*, recorded that one should avoid *faad* and vomiting in winter. Unless such conditions are created in the Arctic country that evacuation (*Istifragh*) is possible there. For example, room temperature should be maintained. For the safety of the patient, BT, CT blood sugar, HIV, etc. should be checked before bloodletting, the place where bloodletting is intended should be massaged. It may help in quick and easy bloodletting. (8)

Sheikh Al-Rais advises that such people who are cold in temperament and live in cold countries, should take measures to awaken the heat and take hot food, for example: *Riyazat*, Use of *Mu'ajan Kabir* etc. Also take a bath with warm water (Hammam) which may lead to sweating. (9)

In addition to above said therapies, we can do the *Pashoya* (Foot Bath) under SOP guidelines in n No of diseases like *Waja'al-Mafaail* (Joint pain), (*Suda*) Headache, *Irq Al-Nasa* (Sciatica) etc as indicated by Unani Physicians. Such countries also have patients suffering from anxiety disorders. So *Nutal* Therapy (Irrigation) may be helpful particularly in the cases of *Sahr* (Insomnia), *Shaqqa* (Migraine) as studies suggests.

Conclusion

In Arctic Countries, we can do much in perspective of Unani System of Medicine particularly when we talk about *Ilaj Bit-Tadbeer* (Regimenal Therapy) and *Ilaj Bil-Ghiza* (Dietotherapy). Unani Physicians has described a list of diets to be used in Cold countries. Due to harsh weather, it is difficult to culture the medicinal herbs and weeds there, but these can be imported from India, which is considered as the hub of medicinal herbs, as and when required.

According to Unani Physicans, Peoples of such countries have *Barid Mizaj* (Cold temperament), hence *Har Tadbeer* (Warm regimes) and *Har Aghzia* (Diets having hot temperament) and *Har Advia* (Drugs having hot temperament) will work

as per principle of Unani treatement i.e *Ilaj Bil Zid* (Contrary treatment). Har Diets Particularly Masale Jat (Spices) e.g., *Darchini* (Cinnamon; *Cinnamomum zeylanicum*), *Tajqalmi* (*Cinnamomum cassia*), *Tezpat* (*Cinnamomum tamala*), *Dagad Phool* (Black Stone flower; *Parmotrema perlatum*), *Piyaz* (Onion; *Allium cepa*), *Lahsan* (Garlic; *Allium sativum*), *Haldi* (Turmeric; *Curcuma longa*), *Filfil Siyah* (Black Pepper; *Piper nigrum* Linn), *Filfil Daraz* (Long Pepper; *Piper longum* Linn), *Filfil Surkh* (Chilli; *Capsicum annum*), *Mirch Sabz* (Green Chilli; *Capsicum frutescens*) etc. will be helpful in this regard. When these spicy foods will be used with various types as suggested by Unani Physicians, this may lead to potentiating and synergistic effect.

Fuqa'h or *Ghiar Muqattar Sharab* (Undistilled wine) as recommended by *Shaikh Al-Rais* may be helpful for *Ina'sh Hararat-e-Gharizi* (Maintenance of body temperature).

In Arctic Region Research on Pulmonary disorders and disorders related to head, brain and nerve disorders may be carried out with Unani Medicine's preventive and curative regimens and interventions.

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