Common Iranian traditional herbal medicine with cold nature used as infusion

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Abstract: **Introduction:** Herbal therapy in Iran dates back to a long time ago and a number of writings regarding this issue are left by great physicians e.g. Avicenna and Rhazes. Today, in spite of remarkable advances in modern medicine, we are confronted with an increasing tendency towards herbal remedies among those seeking for traditional therapies. But according to our knowledge, there is no report about the plants used in Iranian herbal medicine with cold nature. **Materials and Methods:** The junior medical students were grouped into several groups. Then, the information gathered from ethno-pharmacologists, herbal-drug sellers and rural native-healers, from different regions of Iran, especially Northwest, Southwest, Central and Northern provinces. All data collected, were summarized for every species. For each repeated report of a certain indication we added "a point" to the specification of that plant. If the number of every reported indication was more than 7-15 times we reported that indication or pharmacological effect in our final report in this article. We thought that, the higher frequency of the reports of an activity or indication, may mean the most reliable applications of that plant in Iranian traditional medicine. **Results:** 17 species received the higher points as cold plants in Iranian traditional herbal medicine. These herbs are presented here with their specifications. We have summarized the collected data as Scientific name, Family names, English name, Persian name, therapeutic nature (cold, hot or balanced), suggested actions and pharmacology, indication and usage, used parts/preparation, mode of administration. Other comments are added in the end of the represented data. **Conclusion:** According to the data of this study, we did not find any direct relationship between the pharmacological properties and the cold or hot nature of the studied plants. This report, according to our best knowledge, was the first specific one describing the plants with cold nature in Iranian herbal medicine. But, for recognizing the exact relationship between cold nature and the pharmacological activities of the plants, other extended studies should be performed.
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1. Introduction

Herbal therapy, also called phytomedicine or botanical medicine, is an important branch of complementary and alternative medicine and is in fact a traditional therapeutic system which takes advantage of herbal plants to prevent and cure maladies and improve general health (Givens, 2006).

Herbal therapy in Iran also dates back to a long time ago and a number of writings regarding this issue are left by great physicians e.g. Avicenna and Rhazes. Today, in spite of remarkable advances in modern medicine, we are confronted with an increasing tendency towards herbal remedies among those seeking for traditional therapies. Evidences show that the number of patients visiting practitioners of traditional medicine in United States is increasing and Americans' use of herbal medications continues to rise (Riddle, 1985). Approximately $20.1 billion was spent on herbal preparations in 2003, with about 16% of Americans reporting that they were using both herbals and prescriptive medications at the same time (Rhizopoulou, 2007).

Many factors may be involved in such eagerness; among them, every day discovery of adverse affects of chemicals also their risk for pollution of environment and on the other hand, poverty may be considered as the most important cause. Based on the World Health

Organization statistics, more than 80% of people in developing countries resort to herbal remedies to provide their therapeutic needs (Pavord, 2005). Approximately 50% of patients benefit from

some types of traditional medicine and many of them do not inform their physicians about such interventions (Heilmeyer, 2007).

Among the brilliant contributors to the sciences of Pharmacy and Medicine during the Arabian era was one genius who seems to stand for his time - the Persian, Ibn Sina (about 980-1037), called Avicenna by the Western world. Pharmacist, physician, philosopher and diplomat, Avicenna was a favorite of Persian princes and rulers. He wrote in Arabic. His pharmaceutical teachings were accepted as authority in the West until the 17th century, and still are dominant influences in the Orient. He composed the *Kitab ash-shifa'* ("Book of Healing"), a vast philosophical and scientific encyclopedia, and the *Canon of Medicine*, which is among the most famous books in the history of medicine. Avicenna's Book of Healing" was translated partially into Latin in the 12th century, and the complete Canon appeared in the same century.

But though the medical teaching of Jundi-Shapur was in the main Greek, there was no doubt an underlying Persian element, especially in Pharmacology, where the Arabic nomenclature plainly reveals in many cases Persian origins. But the two most glorious periods of pre- Islamic Persia, the Achaemenian (B.C. 550-330) and the Sasanian (A.D. 226-640) both terminated in a disastrous foreign invasion, Greek in the first case, Arab in the second, which involved the wholesale destruction of the indigenous learning and literature, so that it is impossible for us to reconstitute more than the main outlines of these two ancient civilizations. Yet the Avesta, the sacred book of the Zoroastrians, speaks of three classes of healers, by prayers and religious observances, by diet and drugs, and by instruments; in other words priests, physicians and surgeons. As regards the latter, one curious passage in the Vendiddd ordains that the tyro must operate successfully on three unbelievers before he may attempt an operation on one of the "good Mazdayasnian religion." And, of course, Greek physicians, of whom Ctesias is the best known, besides an occasional Egyptian, were to be found at the Achaemenian court before the time of Alexander of Macedon. The medical school of Jundi-Shapur seems to have been little affected by the Arab invasion and conquest of the seventh century of our era, but it was not till the latter half of the eighth century, when Baghdad became the metropolis of Islam, that its influence began to be widely exerted on the Muslims (Heilmeyer, 2007).

2. Material and Methods

For data collection, the junior medical students were grouped into several groups. Then, the information gathered from ethno-pharmacologists, herbal-drug sellers and rural native-healers, from different regions of Iran, especially Northwest, Southwest, Central and Northern provinces. All data collected, were summarized for every species. For each repeated report of a certain indication we added "a point" to the specification of that plant. If the number of every reported indication was more than 7-15 times we reported that indication or pharmacological effect in our final report in this article. We thought that, the higher frequency of the reports of an activity or indication, may mean the most reliable applications of that plant in Iranian traditional medicine. We report here, the plants used in Iranian traditional herbal medicine with cold nature.

3. Results

17 species received the higher points as cold plants in Iranian traditional herbal medicine. These herbs are presented here with their specifications. We have summarized the collected data as Scientific name, Family names, English name, Persian name, therapeutic nature (cold, hot or balanced), suggested actions and pharmacology, indication and usage, used parts/preparation, mode of administration. Other comments are added in the end of the represented data.

[1] Scientific name: *Platanus orientalis* L.
Family: *Platanaceae*
English name: Plane tree
Persian name: (Bargeh-) Chenār
Nature: Cold
Suggested Actions and pharmacology: Antipyretic, bronchodilator, nerve tonic, appetizer, fattener, skin refresher.
Indication and Usage: Dyspnea, pharyngitis, neurological disorders, anorexia.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a cup before meals.
*The infusion of the leaves of this tree ameliorates the pain and pulmonary edema due to the warm nature of the patient.

[2] Scientific name: *Olea europaea* L.
Family: *Oleaceae*
English name: Common olive
Persian name: (Barg-e-) Zeytūn
Nature: Cold
Suggested Actions and pharmacology: Hypotensive, tonic, astringent, diuretic, antipyretic, hypoglycemic, liver protective, memory booster.

Indication and Usage: Liver disorders, headache, tooth-ache.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a cup before meals.

[3] Scientific name: *Salix babylonica* L. and other spp.
Family: *Saliceae*
English name: Willow spp.
Persian name: Bīd
Nature: Cold
Suggested Actions and pharmacology: blood tonic, gastric tonic, sedative, cardiac tonic, anticonvulsive.
Indication and Usage: Severe fever, venereal pain, jaundice, dandruff.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: 2-3 cups is taken daily.

[4] Scientific name: *Malva sylvestris* L.
Family: *Malvaceae*
English name: High mallow, marsh mallow
Persian name: Panīrak
Nature: Cold
Suggested Actions and pharmacology: Lactigenic, sedative, diuretic, laxative, pulmonary tonic, antipyretic.
Indication and Usage: Kidney insufficiancies, enema for proctitis.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take 2 cups between meals.

[5] Scientific name: *Tribulus terrestric* L.
Family: *Zygophyllaceae*
English name: Land caltrops, Turkey-blossom, Puncture vine.
Persian name: Khārkhāsak, Khārkhasak
Nature: Cold
Suggested Actions and pharmacology: Potent diuretic, antilithiasis.
Indication and Usage: bladder and kidney calculi, cholelithiasis, blood tonic, prostatitis.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a cup before meals.

[6] Scientific name: *Alhagi persarum Boiss. & Buhse.*
Family: *Papilionaceae*
English name: Camel's thorn
Persian name: Taranjabīn, Khār-shotor
Nature: Cold
Suggested Actions and pharmacology: Potent diuretic, antilithiasic
Indication and Usage: Urinary tract infections(UTIs)
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a glass before meals.
*In the presence of kidney pain, it may be used for daily water needs.

[7] Scientific name: *Cornulaca monacantha* Delile.
Family: *Chenopodiaceae*
English name: -
Persian name: Tārūn, tārūneh
Nature: Cold
Suggested Actions and pharmacology: Potent hypnotic, nerve tonic, sedative.
Indication and Usage: Rheumatoid arthritis, arthralgia
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take 1/2 cup before meal.
*It is along with *Citrus aurantium* a potent hypnotic.

[8] Scientific name: *Cichoriuna intybus* L.
Family: *Compositae*
English name: Common chicory, Succory
Persian name: Kāsnī
Nature: Cold
Suggested Actions and pharmacology: Liver tonic, blood tonic, hypolipidemic, hypoglycemic, kidney tonic, dermal tonic, rich of vitamin C, antihyperthermic, vasodilator.
Indication and Usage: Acne, itching, arthralgia.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a glass before meal.
*It ameliorates the arthralgia due to the warm nature of the patient.

[9] Scientific name: *Lactuca sativa* L.
Family: *Compositae*
English name: Lettuce
Persian name: Kāhū
Nature: Cold
Suggested Actions and pharmacology: Erythropoetic, antimycobacterial.
Indication and Usage: Anemia, tuberculosis, gastritis, alopecia.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a cup before meal.

[10] Scientific name: *Apium graveolens* L.
Family: *Umbelliferae*
English name: Garden celery
Persian name: Karafs
Nature: Cold
Suggested Actions and pharmacology: Antihemorrhoidic, antilithiatic, diuretic, gastric tonic, energizer, hypuricemic.
Indication and Usage: Rheumatoid arthritis, arthralgia, bloat, gout, hypertension.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: 2-3 cups is taken daily.

[11] Scientific name: *Crataegus azarilus* L.
Family: *Rosaceae*

English name: Azorole hawthorn
Persian name: Kyālak, Zālzālak-e-zard
Nature: Cold
Suggested Actions and pharmacology: Blood tonic, blood tonic, vasodilator.
Indication and Usage: Hypercholesteronemia, hiccup, vertigo.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a cup before meal.

[12] Scientific name: *Coriandrum sativum* L.
Family: *Umbelliferae*
English name: Coriander, Cellender
Persian name: Geshnīz
Nature: Cold
Suggested Actions and pharmacology: Athelminthic, antimicrobial
Indication and Usage: Bloating, gastrointestinal infections, specially: helicobacter pylori infecyion, oral aphthus, acne, liver disorders
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a cup before meal.

[13] Scientific name: *Viola odorata* L.
Family: *Violaceae*
English name: Sweet violet, Violet
Persian name: (Gol-e-) Banafsheh
Nature: Cold
Suggested Actions and pharmacology: Expectorant
Indication and Usage: Common cold, asthma, pulmonary disorders.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a cup after meal.

[14] Scientific name: *Althaea officinalis* L.
Family: *Malvaceae*
English name: Marsh mallow, white mallow
Persian name: (Gol-e-) Khatmī
Nature: Cold
Suggested Actions and pharmacology: Skin softener, nerve tonic.
Indication and Usage: Asthma, bronchitis, pharyngitis, myalgia, cystitis, urinary retention
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take 2-3 cups between meals.

[15] Scientific name: *Ipomea purpurea* (L.) Roth
Family: *Convolvulaceae*
English name: Common morning glory
Persian name: (Gol-e-) Nilūfar
Nature: Cold
Suggested Actions and pharmacology: Blood tonic, antitussive
Indication and Usage: Pulmonary disorders, dysentery, cystitis, nephritis, dysuria, common cold, head-ache, baldder hemorrhagia, pulmonitis
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take 2-3 cups between meals.

[16] Scientific name: *Myrtus communis* L.
Family: *Myrtaceae*
English name: Common myrtle
Persian name: Mord, Murd
Nature: Cold
Suggested Actions and pharmacology: Antihemorrhagic, astringent, hair growth improving tonic.
Indication and Usage: diarrhea, hemorrhoids, oral aphtha.
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take 2 cups between meals.

[17] Scientific name: *Melilotus officinalis* (L.) Desr.
Family: *Papilionaceae*
English name: Yellow sweet clover, Melilot
Persian name: Nākhonak
Nature: Cold
Suggested Actions and pharmacology: Cardiac tonic, nerve tonic, mind refresher
Indication and Usage: Kidney insufficiencies
Used parts/preparation: Infusion of the leaves.
Mode of Administration: Take a cup after meals.

4. Discussions and Conclusion

Although remarkable advances in modern medicine have occurred, there are still many patients who resort to herbal remedies seeking cure and health promotion. Providing an academic list of these plants with their approved pharmacological properties seems to be important for public usage. But deciding about the pharmacological properties may not be achieved easily in the field. For preparation of this data, we suggested this study and according to the statistical bases, we presented a method for collection and approval of the data about the nature of the plants.

In order to prescribe medications properly and safely, sufficient information about therapeutic effects of herbal medicines, their adverse effects and interactions with chemical drugs and supplements is needed (Beck, 2005; Collins, 2000). Several key points contribute to understanding the potential interaction between herbal products and many prescriptive medications (El-Gammal, 1997; Givens, 2006). Therefore investigation of these points by establishing clinical trial studies will provide reliable evidences to be referenced. Launching these studies

requires close scientific collaboration between physicians and pharmacists.

On the other hand it seems that doubts about the standardization of available herbal drugs regarding to pharmacognostic issues and easy to dose formulations remains among the major causes of concern for medical practitioners in prescribing herbal drugs. Therefore, preparing herbals into dosage forms by authorized pharmaceutical companies is an important measure to make herbal remedies more reliable for prescribing physicians. The important role of pharmacy practitioners should also be mentioned here because they are routinely trained a considerable amount of information on the correct usage of herbal drugs here in Iran. A new educational discipline same as "clinical pharmacognosy" may also be helpful to publicize herbal drug prescription and utilization. Also putting herbal remedies under support of insurance companies will make them more cost benefit for patients. The last but not the least issue is for medical insurance organizations. Unfortunately, the main burden of costs for the health expenditures here in Iran is on the shoulders of government sector. This means that most of non-herbal drugs are paid by about 65% by means of the above-mentioned government associated institutions. Many people are financially dependent to the payment by these organizations and unluckily most of herbal drugs are not covered by them. As a result, many physicians are hesitated to impose this amount of out of pocket money to their patients. It seems that a wholistic approach to the scientific, technologic and sociologic aspects of herbal drug utilization is essential for getting the society be benefited by the advantages of valuable natural products and herbal drugs.

Finally 17 plants considered as cold plants. Reviewing the pharmacological properties suggested by respondents, we tried to find a relationship pharmacological properties and the cold or hot nature of the studied plants. According to the data of this study, we did not find any direct relationship between the pharmacological properties and the cold or hot nature of the studied plants. This report, according to our best knowledge, was the first specific one describing the plants with cold nature in Iranian herbal medicine. But, for recognizing the exact relationship between cold nature and the pharmacological activities of the plants, other extended studies should be performed.

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