

A Descriptive Study of Medicinal Plants and Polyherbal Formulation Prescribed for Patients in Persian Medicine Clinic (Salamatkadeh) Affiliated to Tehran University of Medical Sciences (2016)

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ABSTRACT

Persian medicine has a long history in Iran. Iranian People use Persian medicine for various reasons like efficacy and economic benefits. In recent years, WHO strategies were focused on developing traditional medicine to ensure public health protection especially in developing countries. Based on these strategies and to spread correct knowledge of Persian medicine in society, Persian medicine clinic (Salamatkadeh) affiliated to Tehran University of Medical Sciences was established in 2007. Until now no study was performed about medicinal plants and polyherbal formulations prescribed for patients in this clinic. This study aimed to provide detailed descriptions about medicinal plants and polyherbal formulations presented in Persian medicine clinic. Data were collected from medical record information during June to December 2016. Obtained data were analyzed with SPSS v. 23. As the result of this study there were 5586 people whom referred to Persian medicine clinic during the study period. 109 types of medicinal plants and 170 polyherbal formulations are prescribed by physicians. *Matricaria chamomilla* (11%) and *Kabed* (herbal preparation for alleviating liver disorders) (7%) were the most commonly used medicinal plants and polyherbal formulations respectively. According to Persian medicine, most usable herbal medicines detected in this study have varies applications and some of them have not been studied yet. Investigation of the key usages can be subjected for future studies.

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Introduction

Traditional medicine has a long history in Iran and is part of the Iranian culture. A large number of people utilized Persian medicine for treating disease due to some reasons like efficacy and economic benefits [1]. Persian medicine theory is based on four tempers (hot, cold, dry and wet) which made human body and are related with some parameters like genetic, age, mood, physical activity, environment condition and diet regimen. The lack of balance between four tempers causes disorders. For treating the patients, restoring the balance of tempers is induced by different methods like diet regimen, cupping and herbal medicines [2]. Pharmaceutical science holds a special place in ancient Persia [3]. A large part of Persian medicine manuscripts are about the description of medicines and related method of use. For example, Avicenna in Canon of Medicine described medicines in the first and large parts of his book. In addition Pharmaceutical textbooks called Gharabadin (Qarabqdin) were detailed many dosage forms from different plant, animal or mineral sources. Persian manuscripts are a collection of ancient knowledge in addition to special innovation of authors [4] and are important source for discovering new medications. Nowadays, there are various plants that have been sold in unpackaged form in markets called *Attari*. Some of sellers have traditional knowledge and experience about the herbal medicine nevertheless their knowledge may sometimes be in error [4, 5]. Furthermore, due to increase in people attention toward Persian medicine, entry of new herbal medicines has increased in last two decades [6] and traditional sellers didn't aware enough about them. Other therapeutic measures associated with Persian medicine were also performed by people who had no academic training and there was lack of reliable centers for presentation of standard Persian medicine services. So, School of Traditional Medicine was established by Tehran University of Medical Sciences (TUMS) in 2007. The mission of this academy is training physicians and pharmacists who are expert in Persian medicine, supporting scientific researches and to spread correct knowledge of Persian medicine in society [7]. In

addition educational clinics affiliated to TUMS provide health services related to Persian medicine. According to recent study more than 60% of people were satisfied with health services offered in Persian medicine clinic [8] but there is no published data about medicinal plants and polyherbal formulations administered by physicians. This study is designed to providing detailed descriptions about medicines presented in this clinic.

Materials and methods

This research is retrospective study including new patients receiving medical treatment at Persian medicine clinic. Data was collected from medical record information from June to December 2016. To obtain missing data patients also were interviewed by telephone. This study was approved by Institutional Review Board (**TUMS Research** Department). Prescribed plants and polyherbal formulations were recorded. Obtained data were analyzed by SPSS v. 23

Result

There were 5586 people whom referred to traditional medicine clinic from June to December 2016. 3910 (70%) people were women and others (30%) were men. Age range of patient was between 24 to 49 years old (mean age: 36.5± 12). 22 physicians in Persian medicine clinic visited the patients during the mentioned time. Four expert pharmacists provided services for patients including Labeling the formulations, checking conventional medicine which consumed by patients and reviewing the interactions with herbal preparations.

Raw medicinal plants and monoherbal formulations

There are 109 medicinal plants or plant-derived substances prescribed in raw forms. These samples included aerial parts and leaves (32 types), fruits (27 types), seeds (21 types), rhizome and roots (15 types), flowers and buds (8 types), resins and manna (6 types). *Matricaria*

chamomilla L. has been prescribed more than other medicinal plants during the studied period.

The ten most commonly used medicinal plants are listed in table 1.

Table 1: The most prescribed medicinal plants in raw form in traditional medicine clinic affiliated to TUMS

Family	Scientific name	Persian name	Part	Percentage
Compositae	<i>Matricaria chamomilla</i> L.	<i>Babooneh</i>	Aerial part	11%
Rhamnaceae	<i>Ziziphus jujuba</i> Mill.	<i>Anab</i>	Fruit	10%
Apiaceae	<i>Pimpinella anisum</i> L.	<i>Anisun</i>	Fruit	10%
Lamiaceae	<i>Melissa officinalis</i> L.	<i>Badranj booye</i>	Leaves	6%
Caprifoliaceae	<i>Nardostachys jatamansi</i> (D.Don) DC.	<i>Sonbol al-tib</i>	Root	6%
Apiaceae	<i>Trachyspermum ammi</i> (L.) Sprague	<i>Zenian</i>	Fruit	5%
Apiaceae	<i>Cuminum cyminum</i> L.	<i>Zire sabz</i>	Fruit	4%
Apiaceae	<i>Bunium persicum</i> (Boiss.) B.Fedtsch.	<i>Zire siah</i>	Fruit	4%
Lamiaceae	<i>Lavandula angustifolia</i> Mill.	<i>Ostokhodus</i>	Aerial part	3%
Boraginaceae	<i>Echium amoenum</i> Fisch. & C.A.Mey	<i>Gavzaban</i>	Leaves	3%

Polyherbal formulation

In addition different herbal preparations including capsules (58 types), tablets (24 types), syrups (36 syrups), oils (16 types), electuaries (22 types) and powder mixtures (14 types) were also

prescribed by physicians. The ratio of different types of polyherbal formulation in Persian medicine clinic affiliated to TUMS is shown in graph 1. The five most commonly prescribed medications in mentioned period have been listed in table 2.

Graph 1. The ratio of different types of polyherbal formulation in Persian medicine clinic affiliated to TUMS

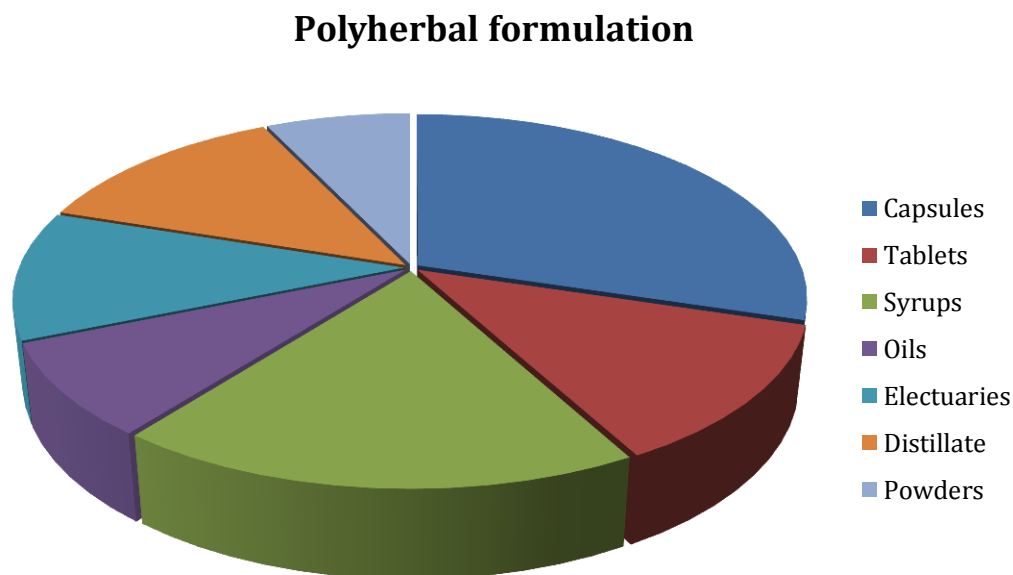


Table 2. The most usable polyherbal formulation in traditional medicine clinic affiliated to TUMS

Persian name	Dosage form	Ingredients	Part used	Main applications	Percentage
Kabed (kabid)	Capsule	<i>Coriandrum sativum</i> L. <i>Fumaria parviflora</i> Lam. <i>Lactuca sativa</i> L. <i>Ziziphus jujuba</i> Mill. <i>Cichorium intybus</i> L. <i>Senna alexandrina</i> Mill. <i>Thymus vulgaris</i> L.	Fruit Leaves Seed Fruit Leaves Leaves Leaves	Liver dysfunction, Cirrhosis, Skin disease	7%
Samgh (Moshel Samghi)	Capsule	<i>Ferula persica</i> Willd. <i>Dorema ammoniacum</i> D.Don <i>Ferula gummosa</i> Boiss. <i>Citrullus colocynthis</i> (L.) Schrad.	Oleo-gum-resin Oleo-gum-resin Oleo-gum-resin Fruit	Neurological diseases	5%
Aslagh (raha)	Capsule	<i>Vitex agnus-castus</i> L. <i>Foeniculum vulgare</i> Mill. <i>Daucus carota</i> L.	Fruit Fruit Seed	Regulation of , menstruation Female sexual dysfunction	5%
Sekanjabin e Onsoli	Syrup	<i>Drimia maritima</i> L. Stearn honey and vinegar	Bulb	Liver tonic, respiratory ailments	5%
Monzeje soda	Powder	<i>Ziziphus jujuba</i> Mill. <i>Cordia myxa</i> L. <i>Echium amoenum</i> Fisch. & C.A.Mey <i>Melissa officinalis</i> L. <i>Adiantum capillus-veneris</i> L. <i>Lavandula angustifolia</i> Mill. <i>Fumaria parviflora</i> Lam. <i>Foeniculum vulgare</i> Mill. <i>Glycyrrhiza glabra</i> L.	Fruit Fruit Leaves Leaves Leaves Leaves Leaves Fruit Rhizome	Relieve depression, Hypnotics, for elimination of waste products and undesirable substances from body	4%

Discussion

For the first time in Iran, this study analyzed prescribed medicinal plants in Persian medicine clinic (Salamatkadeh) affiliated to Tehran University of Medical Sciences. Patients who come to this clinic are treated in accordance with the principles of the of Persian medicine theory. The main base of disease diagnosis is taking a comprehensive history from patients. In addition examination including scan of face, pulse and body temperature are used for detect disease [8]. Some patients received prescriptions contain a collection of plants in their raw form. These plants

should be used as infusions, decoctions or maceration for oral consumption. In addition some of them are used for aromatherapy or preparation of warm baths. Based on our results, chamomile is the mostly prescribed sample with a proportion of 11 percent of all prescribed medicinal plants. This plant has many applications in Persian medicine such as antispasmodic, analgesic, emmenagogue, galactagogue, carminative and it is also useful for skin disease [9]. Chamomile use for inflammatory and spasmodic gastrointestinal disorders and skin inflammation is approved by German Commission E. [10]. *Ziziphus jujuba* Mill. and *Pimpinella anisum* L. are

in second place in terms of prescription in the Persian medicine clinic. *Ziziphus jujuba* (jujube) is locally named “Annab” in Iran. According to Persian medicine documents *Annab* Fruits are used as antitussive, laxative and hypotensive medicament [9]. Tannin, flavonoids and alkaloids are the main composition of this plant. Different biological activities like anti-inflammatory, antimicrobial, antioxidant, anxiolytic and wound healing effects are reported from jujube fruit and stem bark [11]. *Pimpinella anisum* L. (Anise) named “Anisun” in Persian. Fruits and fruit oil of this plant have been used in Persian medicine as carminative, antiseptic, antispasmodic and expectorant agent [12]. Medicinal herb packages are presented in the clinic's pharmacy. Three commonly used medicinal plants, Chamomile, jujube and anise, are mainly prescribed for use as decoction.

From herbal mixtures, *kabed* (*kabid*) capsule is the most prescribed one. This formulation contains Seed of *Lactuca sativa* L., Fruits of *Coriandrum sativum* L. and *Ziziphus jujuba* Mill, Leaves of *Fumaria parviflora* Lam., *Cichorium intybus* L., *Senna alexandrina* Mill. and *Thymus vulgaris* L. *Kabed* means liver in Persian. According to Persian medicine, liver is the main organ for production of humors (first fluid substances obtained from the food) [13]. So, Liver dysfunction is resulted in inappropriate production of humors which causes the human body to be unhealthy. In different diseases, it is necessary to restore the liver to normal status and *kabed* capsule is one of the best choices. *kabed* capsule in addition to some of other Persian medications showed beneficial effect for treatment of a patient with cryptogenic cirrhosis [14]. Some of other herbal products are also subjected for researches and thesis for example *Sekanjabin e Onsoli* (Squill Oxymel) was effective as an adjuvant treatment for patients with moderate to severe persistent asthma [15].

So far, numerous studies have assessed *in vitro* and *in vivo* research studies for documenting the efficacy of Persian medicine for varies diseases such as diabetes and cancer. The Results of these studies have shown that Persian medicine can be considered as an important source for discovering new medicines [16-17]. However, more qualified

clinical trials are needed for achieving conclusive results on the effectiveness and safety of medicinal plants and polyherbal formulation traditionally used in Persian medicine.

Conclusion

There are different and considerable types of herbal remedies which are prescribed in Persian medicine clinic (Salamatkadeh) affiliated to TUMS. With regard to determining the most widely used products in this investigation, evaluation of the efficacy of unstudied medicines via clinical trials is recommended for future researches.

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Conflict of Interests

Authors certify that there is no actual or potential conflict of interest in relation to this article.

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