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# Therapeutic Potential of Unani Drugs in the Management of Usr-e-Tams: An overview

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#### **ABSTRACT:**

One of the most prevalent gynecologic problems is dysmenorrhea. It is the primary cause of absenteeism from school or college for half of all adolescent females in the current environment. is therefore most prevalent in the 20–24 age range. NSAIDs and COX-2 inhibitors are the main stays of therapy. But the patient's comfort from the treatment is just momentary. The Unani ancient literature states that panful menstruation is caused by the stagnation of menstrual blood as a result of cervical blockage. Various therapeutic methods are employed to alleviate menstrual discomfort, such as the application of Ilaj Bil Dawa, Ilaj Bil Ghiza, and Ilaj Bil Tadbeer, among others. are available in Unani scriptures.

Dysmenorrhoea is of two type namely primary and secondary dysmenorrhoea. Primary dysmenorrhoea is used to describe normal period pain experienced by many women during the time of their period and there is no underlying medical problem. Secondary dysmenorrhoea is used to describe pain results of an underlying gynecological problem. There are number of measures like sitz bath, simple morningwalk and dietotherapy. There are number of herbal drugs mentioned in Unani literature which are useful intackling menstrual conditions . The review highlights about dysmenorrhoea and some of those herbal drugs which are used in Unani System of medicine.

**Keywords:** Women, NSAIDs, Usr-e-Tams, Dysmenorrhea., Reproductive health

#### **Introduction**:

The most typical adolescent presentation is that of menstrual problems. Seventy-five percent of teenage girls have some menstrual-related issues. <sup>1</sup> Dysmenorrhea is among the most prevalent problems. Just before the menstrual period begins, the patient has excruciatingly painful lower abdominal cramps that are accompanied by perspiration, nausea, vomiting, and diarrhea. Women who are affected describe the pain as acute, sporadic spasms that start in the suprapubic area and can spread to the lower back or the backs of the legs. Pain typically starts a few hours after the menstrual period begins and peaks during the first day or two of the cycle when the flow becomes the heaviest <sup>2</sup>. Within the Unani medical system, , Usre tams, sometimes also referred to as dard-e-rahem or aujaur rahem3, is the phrase used to describe dysmenorrhea or painful menstruation. <sup>3</sup>

Hippocrates, the Greek philosopher, claimed that dysmenorrhea is caused by cervical blockage secondary to the halt of monthly blood flow, which results in painful menstruation. Another idea that is addressed in the classical Unani writings is that the blood becomes sticky due to an excessive buildup of



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humors (balgham and sauda). This makes it harder for blood to perfuse tiny arteries, which leads to dysmenorrhea.<sup>4</sup>

Shaikhur Rayees Abu Ali Husain bin Abdullah bin Sina states that usre tams is caused by a blockage in the menstrual blood flow .Additionally, he explained that a regular cycle results from a balance between the quantity and quality of menstrual blood.Abnormal and irregular menstruation can lead to a number of disorders, including oligomenorrhoea and amenorrhea.<sup>5</sup>

Prominent Unani physician Zakaria Razi described dysmenorrhea as aujaur rehm and talked about zaufe rehm, sartane rehm, and ehtebase rehm as its causes<sup>6</sup>.

NSAIDS such as mefenamic acid, ibuprofen, tiaprofenic acid, etc. are the available treatments despite the widespread occurrence of the condition. Among these, mefenamic acid is frequently used to treat dysmenorrhea pain since it also helps with irregularities associated to menstruation (heavy menstrual bleeding).<sup>7</sup>

These medications work by inhibiting the prostaglandin receptor in the uterus and reducing the amount of prostaglandin produced by cyclooxygenase enzymes. <sup>8</sup> Even though the medications are very effective, patients frequently complain of headaches, sleepiness, and dyspepsia. Such a circumstance calls for the implementation of an alternate dysmenorrhea treatment plan.

Treatment methods in the Unani medical system are divided into four categories: ilaj bit tadbeer, ilaj bit Ghiza, ilaj bit dawa, and ilaj bit yad. As a result, the diet, clinical signs, and patient's mizaj are taken into consideration when planning the course of treatment. Since most females who appear with dysmenorrhea have an excessive accumulation of sauda and Khilte Balgham, ilaj biz zid is used as a therapy.<sup>9</sup>

Numerous medications, including Baboona, Nakhoona, rewandchini, Abhal, hilteet, soya, kalonji, Hulba, Gule surkh, saunf, etc., are suggested for the treatment of dysmenorrhea in the unani literature.11 These medications include muhallile auram, dafae tashannuj (antispasmodic), mudire bol, mudire haiz (emmenogogue), and musakkin, among other clinical qualities. <sup>10</sup>

#### LIST OF SINGLE DRUGS USED IN USR-E-TAMS

UNANI NAME	SCIENTIFIC NAME	FAMILY	FUNCTION
ABHAL	Juniperus communis	CUPRESSACEAE	Mudire baul(
			Diuretics) ,Mudirri-
			Haiz
			Emmenogauge
			((,Muhallil,Musakeen
			alam 1 1 Analgesic
Rewand chini	Chinese rhubarb	Polygonaceae	Musakin Alam
			,Mudire —e-
			haiz,Mudire baul <sup>12</sup>
Sudaab	Ruta graveolans	Rutaceae	Mudirre baul wa haiz
			(Diuretic and
			Emmenagogue) 13
Baboona	Matricaria	Asteraceae	Muhallil (Resolvent)
	Chamomilla		Musakkin-e-Alam
			(Analgesic), Mudirr-i-



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			Bawl (Diuretic) Mudirr- <sup>14</sup> i- Haiz(Emmenagogue)
Badyan	Feoniculum vulgare	Umbelliferae	Mudirr-i-Haiz (Emmenogogue, Mudirr-i-Bawl (Diurectic),Mohallil- e-warm (Antiinflammatory) <sup>15</sup>
Gaozaban	Onosma bracteata	Boraginaceae	Diuretic (Mudirre-Baul, Tonic (Muqawwi) <sup>16</sup>
Amaltas	Cassia fistula	Leguminosae	Mudirr-i-Hayz (Emmenogogue, Mudirr-i-Baul (Diurectic),Mohallil- e-warm (Antiinflammatory <sup>17</sup>
GUL-E- Tesu	Butea monosperma	Fabaceae	antiinflammatory, antitumor, diuretic [Kirtikar and Basu, 1935.
Baobarang	Embelia ribes	Primulaceae.	Diuretic, Daaf-e-dard (Analgesic, (Emmenogogue, Mudirr-i-Baul. 18
Ginger	Zingiber officinale	Zingiberaceae.	Mudirr-i-Haiz (Emmenogogue, Mudirr-i-Bawl (Diurectic),Mohallil- e-warm (Antiinflammatory <sup>19</sup>
Jund Bedastar	Castor canadensis	Castoridae	Mudirr-i-Baul (diuretic), Mudirr-i-Ḥaiz (emmenagogue), Musakkin Awja' (analgesic) [10], Mufattih Sudad (deobstruent), Muqawwī-i-Rahim (uterine tonic), Musleh Rahim



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			(corrective of uterus
Pipperment	Mentha piperita	Lamiaceae	,Antispasmodic, carminative, anti- inflammatory, analgesic anti flammatory
Zafran	Crocus sativus	Iridaceae	emmenagogue, diauretic, antispasmodic, <sup>20</sup>
Tukhme karafs	Apium graveolens	Apiaceae	Mudirr-i-Baul (Diuretic), Mufattit-i- Hasāh (Lithotriptic), Dafi'-i-Tashannuj (Antispasmodic) and Kāsir-i-Riyāh (Carminative) <sup>21</sup>
Aneeson	Pimpinella anisum	Umbelliferae	Muddir-e-Bol, diuretic, and diaphoretic
Murmaki	Commiphora myrrha	Burseraceae	Mudirr-i-haiz (emmenagogue), Usr- i-tams (dysmenorrhea),
Hilteet	Ferula asafetida	Apiacea	Mudirr-i-haiz (emmenagogue), Usr- i-tams (dysmenorrhea.
Muqil	Commiphora mukul	Burseraceae	diuretic (Mudirr-i-Baul), lithotriptic (Mufattat-i-Hasāh), aphrodisiac (Muqawwī-i-Bāh), emmenagogue (Mudirr-i-Haiz ), lactogogue (Mudirr-i-Laban), abortifacient (Māni'al-Haml) <sup>23</sup>
Kalonji	Nigella sativa	Ranunculaceae	(Mudir-e-Baul wa Haiz) (Yarqaan)



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			Mukhrij-e-Janeen. <sup>24</sup>
Afiyun	Papaver somniferum	Papaveracea	Musakkin alam (Antianalgesic) Mudir (Diuretic) Habis (Stringent) Musakkin alam (Antianalgesic
Turbud	Operculina turpethum	Convolvulaceae	Mudir-e-bol, Daf-e- wajaulmafasil [Munaqqi-e-Dimagh] , Mushil, <sup>25</sup>
SOYA	Anethum graviolans	Apiaceae	Musakkin alam (Antianalgesic) Mudir (Diuretic) Habis (Stringent) Musakkin alam (Antianalgesic
Irsa	Iris ensata	Iridacea	Emmenogogue, anti- inflammatory, abortifacient <sup>26</sup>
Ashwagandha	Withania somnifera	Solanaceae	diuretic, anthelmintic and stimulant
Gule surkh	Rosa damascene	Rosaceae	Analgesic, anti- inflammatory, antioxidant <sup>27</sup>

### List of compounds drugs used in Usr-e-Tams:

Compound drug	Composition	functions
Habb-e- Hilteet	Heeng,zanjabeel,namak lahori ,Namak	Antiinflammatory,
	siyah ,Qaranfal,kholanjan,filfil siyah ,Filfil	Antispasmodic,
	draz, kabab chini,Mastagi ,Filfil	Emenogouge
	moya,Nankhwah, Post Baleela ,Post	
	Haleela ,Amla khusk ,shoneez, Aab-e-	
	Gheekwar ,Aab-e- lemu,Aab-e- Adrak	
Habb-e- mudir	Sibr ,zafran,Heerakasis	Emmenogougue
		,Antiinflammatory,
		Antispasmodic
Jawarish qurtum	Maghze qurtum ,Aneeson,	Antispasmodic,
	Bisfaiz, Maghaze Badam sheerein, Mastagi,	Antiinflammatory,
	Roghan zard,shakr safed .	Emmenogogue



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Jawarish Zanjabeel	Zanjabeel, Heerkhurd, samag arbi, Nishasta	Antispasmodic,
	Gundum, Darcheeni, zaifal, zafran, arke	Antiinflammatory,
	Gojaba ,shaker safed,	Emmenogogue

#### **Pre-clinical And Clinical Studies:**

**Ferula assafoetida** (**Hilteet**) is currently scientifically and pharmacologically proven for its analgesic, antinociceptive, anti-inflammatory, and antispasmodic activity in animal models and are therefore helpful in reduction of menstrual pain. <sup>29</sup>

(Hulba) fenugreek. In a double-blind, randomized, placebo-controlled study, Younesy et al. assessed how fenugreek seeds affected students' primary dysmenorrhea symptoms. They proposed that fenugreek seed powder taken during the menstrual cycle could lessen dysmenorrhea's severity. The authors talked about how fenugreek's diuretic quality lowers pelvic hyperemia and its antispasmodic effect on the gastrointestinal tract has been documented.<sup>30</sup>

Fenugreek leaf extracts have demonstrated anti-inflammatory, antipyretic, and anti-anxiety properties in animal models. The main constituents of fenugreek extracts are phenols, glycosides, and alkaloids, according to phytochemical investigations.

(**Baboona**), or **Matricaria chamomilla**. Karimian et al. examined the effects of Matricaria chamomilla and mefenamic acid on primary dysmenorrhea in ninety female students in a triple-blind, randomized clinical trial research. They discovered that Matricaria chamomilla worked well to lessen bleeding and the intensity of primary dysmenorrhea .Matricaria chamomilla tea was discovered by Modares et al. to be beneficial in decreasing primary dysmenorrhea.<sup>31</sup>

**Citrus morinda (Noni).** Because of its anti-inflammatory qualities, Fletcher et al. reported that Morinda citri-folia (Noni) was useful in lowering discomfort during menstruation in primary dysmenorrhea. The study was a randomized, double-blind, placebo-controlled trial.<sup>32</sup>

**Chaturbeeja**. The combination of four plant seeds (Trigonella foenum-graecum, Lepidium sativum, Nigella sativa, and Trachyspermum ammi) known as chaturbeeja has been used in traditional medicine for a number of purposes, including the treatment of dysmenorrhea, which is the most common gynecological symptom that women report. In 25 patients with primary dysmenorrhea (Kashtartava), a single-blind, prospective observational clinical trial assessed the effectiveness of Chaturbeeja powder (3 g single dosage with hot water) for 10 days (7 days before menstruation and 3 days during period). 12 patients showed significant improvement, 8 showed moderate improvement, and showed weak improvement.<sup>33</sup>

#### Zingibeel, or Zingiber officinale

Awed et al.'s quasi-experimental study design assessed the impact of ginger herbs on female participants' pain relief from primary dysmenorrhea in Shagra, Kingdom of Saudi Arabia. They discovered that giving females with primary dysmenorrhea fresh ginger three days prior to and throughout the first two days of their menstrual cycle was an excellent way to relieve menstrual pain. The traditional medicine ginger, which is derived from the rhizome of Zingiber officinale, has anti-inflammatory and anticarcinogenic properties.<sup>34</sup>

**Foeniculum vulgare** has agents that act as a nethole and an antispasmodic. In Iran, fennel seeds were considered a safe natural remedy for primary dysmenorrhea. In Iranian culture, fennel is a recognized herbal remedy for the treatment of dysmenorrhea.<sup>35</sup>



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DRUGS	RCT	
Cinnamon (Cinnamomum	Jaafarpour et al. 2015 <sup>36</sup>	
zeylanicum)		
Damask rose (Rosa	. Bani et al 2014 <sup>37</sup>	
damascena)		
Rhubarb (Rheum emodi)	Rehman et al 2015 <sup>38</sup>	
Fennel (Foeniculum vulgare)	. Bokaie et al.2013 <sup>39</sup>	
Fenugreek (Trigonella	Inandmar et al 2012 <sup>40</sup>	
foenum-graecum)		
Ginger (Zingiber officinale)	Jenabi et al 2013 41	
Dill (Anethum graveolens)	Heidarifar et al.2014 <sup>42</sup>	
Peppermint (Mentha piperita)	Heshmati et al 2016 <sup>43</sup>	
Valerian (Valeriana	Mirabi et al 2011 <sup>44</sup>	
officinalis)		

#### **Discussion and conclusion:**

Despite the widespread occurrence of diseases, there is currently no permanent cure for dysmenorrhea; therefore, the options for treating the condition in the existing medical system are somewhat limited and also have adverse effects. Eminent Unani Scholar described various Unani formulations in the authentic books for the treatment of dysmenorrhea. Even though disorders are common, Dysmenorrhea presently has no known permanent cure; as a result, the alternatives available to treat the ailment within the current medical system are fairly restricted. Perhaps some have negative impacts as well. Dysmenorrhoea is a health problem that affects the daily activities

and quality of life of many women the information found in Unani manuscripts about menstruation, pelvic pain, uterine pain, dysmenorrhea, and how to treat these conditions with diet therapy, dry cupping, takmeed (hot fomentation), nutool therapy, and medicinal herbs like ginger, rose, fenugreek, cumin, and others is abundant. These plants have recently been shown to have analgesic, anti-inflammatory, and antispasmodic properties through pharmacological research. Therefore, the validation and preservation of traditional knowledge is essential as a precondition for future study and is important for application in the contemporary day.

#### **References:**

- 1 Iqbal A,Jan A,Sheeraz M,Qureshi H,A Shah A,Huma A,Raheem efficacy of hijamah bila shurt in primary dysmenorrhea(journal of drug delivery and therapeutics 2018,8(5)365-368
- 2 Razi Z Kitabul Havi vol 9<sup>th</sup> .New Delhi :CCRUM 2001; 20;30-33.
- 3 Nafees H,Anjum A. Dry cupping therapy a way forward in the management of primary dysmenorrhoea. (Journal of pharmaceutical research international )33 (33A) 46-52 ,2021 ISSN :2456-9119
- 4 Sina ibna Al Qanoon fit tib vol.3<sup>rd</sup> New Delhi institute of history of medicine and medical research-1981; 868,869,877.
- 5 Razi Z Kitabul Havi vol 9<sup>th</sup> .New Delhi :CCRUM 2001; 20;30-33



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- 6 Abadian K, Keshavarz Z, Mojab F, Alavi Majd H, Abbasi NM. Comparison the effect of mefenamic acid and Teucrium polium on the severity and systemic symptoms of dysmenorrhea. Complementary therapies in clinical practice
- 7 Rajat S,Kumar Manoj M,Kumar Amit P,Abhishek S,Krishna K. An insight of non steroidal anti inflammatory drugs mefenemic acid: A review GSC Biological and Pharmaceutical sciences e-ISSN: 2581-3250, CODEN (USA): GBPSC2
- 8 Nabi M.G Makhzane mufadat va murakabbat. Vol 2<sup>nd</sup> CCRUM pp 53 Hakumate hind New Delhi Ghani N.H Khazainul advia 2011 pg 317-319 Idara kitab us shifa New Delhi.
- 9 Safiuddin AS, Unani Advia Mufrada, Qawmi Council Barae Farogh Urdu Zaban, 2010, p 18.
- 10 Kirtikar KR, Basu BD. Indian Medicinal Plants, Priodic Expert Book agency, Delhi, 1987; III:2107-2109.
- 11 WHO (World Health Organization) (2002) Traditional medicine: growing needs and potential. WHO Policy Perspect Med 2:1–6.
- 12 Isaac O. Therapy with chamomile-experience and verification. *Disch Apoth Ztg.* 1980;120:567–70. [Google Scholar].
- 13 Agarwal, R., Gupta, S.K., Agarwal, S.S., Srivastava, S., Saxena, R.,2008. Oculohypotensive effects of Foeniculum vulgare in experi-mental models of glaucoma. Indian J. Physiol. Pharmacol. 52, 77–83.
- 14 Qureshi US, Qaiser M. Palynological study of Onosma (Boraginaceae) from Pakistan. Pak J Bot 1987;19:99-105.
- 15 G Parthasarathy, V Prasanth.Hepatoprotective Activity of Cassiafistula Linn. Bark Extracts againstCarbon Tetra Chloride Induced LiverToxicity in Rats. Int J Pharmacol. 2008;6:2
- 16 Safiuddin HA (1979). UnaniAdviaMufradah, Council for Urdu Promotion, New Delhi, pp.189-190
- 17 Beg T, et.al. Antigenotoxic Effect of Genistein and gingerol on genotoxicity induced by norethandrolone and oxandrolone in cultured human lymphocytes. Int J Pharmacol. (2008);4:177-183.
- 18 Moghaddasi M. Saffron chemicals and medicine usage. *Journal of Medicinal Plant Research: Planta Medica*. 2010;4(6):427–430
- 19 Khalil A, Nawaz H, Ghania JB, Rehman R, & Nadeem F. 2015. Value added products, chemical constituents and medicinal uses of celery (Apium graveolens L.) A review. International Journal of Chemical and Biochemical Sciences
- 20 Baitar I. Kitab al-Jame li Mufradat al-Advia wa al-Aghziya, Volume 1V. New Delhi: Central Council for Research in Unani Medicine. 2003:316-320.
- 21 Pooniya et.al. Review article on gum guggul.International journal of pharmacognosy and phytochemical research 2014; 6(2); 347-354
- 22 Ahmad W, Khan RM, Zeenat F, et al. Therapeutics, phytochemistry and pharmacology of an important Unani drug kalonji (Nigella sativa Linn): A review. European journal of pharmaceutical and medical research. 2017; 4(7):329-346.
- 23 Anonymous. Standardization of single Drugs of Unani Medicine, Part1.CCRUM, Ministry of Health and Family Welfare, Department of AYUSH. New Delhi, 2006.
- 24 Haleem A, Latif A, Rauf A, Siddiqui N, Rehman S. Physicochemical and phytochemical standardization of irsa (iris ensata thunb.). Int J Res Develop Pharm Life Sci. 2015; 4(3):1498-1505.



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- 25 Loghmani-Khouzani H, Sabzi-Fini O, Safari J. Essential oil composition of Rosa damascena Mill cultivated in central Iran. Scientia Iranica 2007; 14: 316-319.
- 26 Razi Z Kitabul Havi vol 9<sup>th</sup> .New Delhi :CCRUM 2001; 20;30-33.
- 27 Bagheri SM, Dashti-R MH, Morshedi A. Antinociceptive effectof Ferula assa-foetida oleo-gumresin in mice. Res Pharm Sci.2014;9:207-212
- 28 Younesy S, Amiraliakbari S, Esmaeili S, Alavimajd H, Nouraei S.Effects of fenugreek seed on the severity and systemic symptomsof dysmenorrhoea. J Reprod Infertil. 2014;15:41-4
- 29 Modares M, Mir-Mohammadali M, Ashrieh Z, et al. Comparisonof the effect of mefenamic acid and Matricaria chamomilla cap-sules on primary dysmenorrhea. J Babol Univ Med Sci. 2011;13:50-58.
- 30 Fletcher HM, Dawkins J, Rattray C, Wharfe G, Reid M, Gordon-Strachan G. Morinda citrifolia (Noni) as an anti-inflammatorytreatment in women with primary dysmenorrhoea: a randomiseddouble-blind placebo-controlled trial. Obstet Gynecol Int. 2013;2013:195454
- 31 Kamini D, Kiran C. Chaturbeeja in primary dysmenorrhoea(Kashtarva): an observational study. J Pharm Sci Innov. 2012;1(3):27-3
- 32 Chaiyakunapruk N, Kitikannakorn N, Nathisuwan S, Leeprakob-boon K, Leelasettagool C. The efficacy of ginger for the preven-tion of postoperative nausea and vomiting: a meta-analysis. Am JObstet Gynecol. 2006;194:95-
- 33 Bokaie M, Farajkhoda T, Enjezab B, Khoshbin A, Mojgan KZ.Oral fennel (Foeniculum vulgare) drop effect on primary dysme-norrhoea: effectiveness of herbal drug. Iran J Nurse MidwiferyRes. 2013;18:128-13
- 34 Jaafarpour M, Hatefi M, Khani A, Khajavikhan J. Comparative effect of cinnamon and ibuprofen for treatment of primary dysmenorrhoea: a randomized double-blind clinical trial. J Clin Diagn Res. 2015;9(4):4
- 35 Bani S, Hasanpour S, Mousavi Z, Garehbaghi PM, Gojazadeh M. The effect of Rosa Damascena extract on primary dysmenorrhoea: a double-blind cross-over clinical trial. Iran Red Crescent Med J. 2014;16(1):1–6.
- 36 Rehman H, Begum W, Anjum F, Tabasum H, Zahid S. Effect of rhubarb (Rheum emodi) in primary dysmenorrhoea: single-blind randomized controlled trial. J Complement Integrative Med. 2015;12(1):61–69
- 37 . Bokaie M, Farajkhoda T, Enjezab B, Khoshbin A, Mojgan KZ. Oral fennel (Foeniculum vulgare) drop effect on primary dysmenorrhoea: effectiveness of herbal drug. Iran J Nursing Midwifery Res. 2013;18(2):128–132
- 38 Inanmdar W, Sultana A, Mubeen U, Rahman K. Clinical efficacy of Trigonella foenum-graecum (Fenugreek) and dry cupping therapy on intensity of pain in patients with primary dysmenorrhoea. Chin. J. Integr. Med. 2012;1:1–8
- 39 Jenabi E. The effect of ginger for relieving of primary dysmenorrhoea. J Pak Med Assoc. 2013;63(1):8
- 40 Heidarifar R, Mehran N, Heidari A, Tehran HA, Koohbor M, Mansourabad MK. Effect of Dill (Anethum graveolens) on the severity of primary dysmenorrhoea compared with mefenamic acid: a randomized, double-blind trial. J Res Med Sci. 2014;19:326–330
- 41 Occhiuto F, Pino A, Palumbo DR, et al. Relaxing effects of Valeriana officinalis extracts on isolated human non-pregnant uterine muscle. J Pharm Pharmacol. 2009;61:251–256.
- 40 Zargari A. Medicinal Plant. Tehran: Tehran University Press; 1990. p. 574.