

Systematic Review of Anti-Rheumatic Medicinal Plants: An Overview of the Effectiveness of Articular Tissues and Joint Pain Associated with Rheumatoid Arthritis

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Abstract

Rheumatoid arthritis is a chronic inflammatory disease of the joints characterized by a specific plan of destruction for bones and joints. Rheumatoid arthritis risk factors include genetic, hormonal, environmental and nutritional, and socio-economic factors, age and sex, ethnicity, smoking, infections, and so on. Treatment of inflammatory diseases, such as rheumatoid arthritis is practiced based on traditional medicine in many countries. Many native medicinal plants of Iran have effective properties on hemorrhoid. Thus, in this review, the effective medicinal plants of Iranian ethnobotanical resources on hemorrhoid were reported. In the current review study, a search was done for articles by the keywords urinary retention, ethnobotanical, and medicinal plants. A search on the databases, such as Scopus, ISI C, S ID, Mega Iran, and a number of other databases was performed. 27 herbs from different parts of Iran are traditionally used for the treatment of urinary retention. Medicinal herbs, such as yarrow, oat, colchicum, dill, fennel, wild rue, bitter melon, willow, garlic, burdock, etc. are of the native medicinal plants of Iran, which are effective on the treatment of rheumatoid arthritis.

Keyword: Medicinal plants, Rheumatoid arthritis, Iran

INTRODUCTION

Medicinal herbs have been traditionally a resource for the treatment of many diseases [1-7]. Treatment of inflammatory diseases, such as rheumatoid arthritis is practiced based on traditional medicine in many countries [8]. Rheumatoid arthritis is a chronic inflammatory disease of the joints characterized by a specific plan of destruction for bones and joints [9]. Studies show that the prevalence of rheumatoid arthritis in North America and North Europe is 20-50 cases per 100,000 people, while the outbreak in southern Europe is 9-24 cases per 100,000 people [10-13]. Rheumatoid arthritis risk factors include genetic, hormonal, environmental and nutritional, and socio-economic factors, age and sex, ethnicity, smoking, infections, etc. [14-17]. Rheumatoid arthritis is associated with pain [18-22]. Many native medicinal plants of Iran have effective properties on hemorrhoid. Thus, in this review, the effective medicinal plants of Iranian ethnobotanical resources on hemorrhoid were reported.

METHODOLOGY

In the present review study, a search was done for articles by the keywords rheumatoid arthritis, ethnobotanical, and medicinal plants. A search on the databases, such as Scopus, ISI C, S ID, Mega Iran, and a number of other databases was performed.

RESULTS

27 herbs from different parts of Iran are traditionally used for the treatment of rheumatoid arthritis. The medicinal plants like Yarrow, oat, dill, fennel, March, Eastern Artemisia, Datura, etc. are of the most effective native herbs of Iran on rheumatoid arthritis. Other medicinal plants of different parts of Iran, which are effective on rheumatoid arthritis, along with their additional information, are marked in Table 1.

Table 1: Iranian native medicinal plants for treating rheumatoid arthritis presented in their Persian names, scientific names, and family names, together with their parts used and areas where they are found

Raw	Scientific name	Family name	Persian name	Therapeutic use	Region	Ref.
1	<i>Achillea biebersteinii</i> Afan.	Asteraceae	Boumadaran	Rheumatic disease	Ilam	[23]
2	<i>Avena wiestii</i> Steud.	Poaceae	Youlaf	Rheumatic disease	Ilam	[23]
3	<i>Colchicum kotschyi</i> Boiss.	Iridaceae	Gole hasrat	Rheumatic disease	Ilam	[23]
4	<i>Fritillaria imperialis</i> L.	Liliaceae	Aneshk	Rheumatic disease	Ilam	[23]
5	<i>Stachys lavandulifolia</i> Vahl.	Lamiaceae	Sonbolehei	Rheumatic disease	Ilam	[23]
6	<i>Anethumgraveolens</i>	Apiaceae	Shevid	Rheumatic disease	Sirjan kerman	[24]
7	<i>Cardaria draba</i>	Brassicaceae	Moko	Rheumatic disease	Sirjan kerman	[24]
8	<i>Dracocephalum polychaetum</i>	Lamiaceae	Badranjbokeh kermani	Rheumatic disease	Sirjan kerman	[24]
9	<i>Foeniculum vulgare</i>	Apiaceae	Razianeh	Rheumatic disease	Sirjan kerman	[24]
10	<i>Peganumharmala</i>	Zygophyllaceae	Espan	Rheumatic disease	Sirjan kerman	[24]
11	<i>Lamium album</i>	Lamiaceae	Gazaneh sefid	Rheumatic disease	Sirjan kerman	[24]
12	<i>Lepidium sativum</i>	Brassicaceae	Shahi	Rheumatic disease	Sirjan kerman	[24]
13	<i>Sanguisorba minor</i>	Rosaceae	Toutrobah	Rheumatic disease	Sirjan kerman	[24]
14	<i>Artemisia scoparia</i> Waldst. & Kit.	Asteraceae	Dermaneh sharghi	Rheumatic disease	Khalij fars	[25]
15	<i>Cardaria draba</i> subsp. <i>Chalepensis</i> (L.) O .E.Schulz.	Brassicaceae	Azmak	Rheumatic disease	Khalij fars	[25]
16	<i>Terminalia catappa</i>	Combretaceae	Louz hendi	Rheumatic disease	Khalij fars	[25]
17	<i>Allium Akaka</i> S.G.Gmel.	Amaryllidaceae	Tareh kouhi	Rheumatic disease	Khuzistan	[26]
18	<i>Citrullus colocynthis</i>	Cucurbitaceae	Hendavaneh kouhi	Rheumatic disease	Sistan	[27]
19	<i>Datura innoxia</i> Mill.	Solanaceae	Datoureh	Rheumatic disease	Sistan	[27]
20	<i>Capparis spinosa</i> L.	Capparidaceae	Kour	Rheumatic disease	Kazeroun	[28]
21	<i>Adonis aestivalis</i> L.	Ranunculaceae	Gole atashin	Rheumatic disease	Kazeroun	[28]
22	<i>Adonis dentata</i> L.	Ranunculaceae	Gol khorous	Rheumatic disease	Kazeroun	[28]
23	<i>Salix alba</i> L.	Salicaceae	Bid	Rheumatic disease	Kazeroun	[28]
24	<i>Allium sativum</i> L	Alliaceae	Sir	Rheumatic disease	Mobarakeh Isfahan	[29]
25	<i>Cichorium intybus</i> L	Asteraceae	Kasni	Rheumatic disease	Mobarakeh Isfahan	[29]
26	<i>Arctium lappa</i> L.	Asteraceae	babaadam	Rheumatic disease	Marivan	[30]
27	<i>Urtica dioica</i> L. subsp. <i>dioica</i> .	Urticaceae	Gazaneh dopayeh	Rheumatic disease	Marivan	[30]

DISCUSSION

The study medicinal plants can provide a good research background, not only for rheumatoid arthritis, control but also for a wide variety of other disease [31-40]. The effects of these medicinal plants have been related to their bioactive compounds [41-46]. Although these compounds specifically act on a specific disease, but they have mostly components such as flavonoids which possess antioxidant activities [47-54]. A lot of diseases, including heumatoid arthritis have been shown to increase oxidative stress [55-60]. Hence, these plants with antioxidant activity may have acted on rheumatoid arthritis, at least in part, by these mechanis,. These plants have effective pharmaceuticals and having been used for their treatment since long time ago [61-65]. Therefore, they are considered as being safer than synthetic drugs. Hence, they have attracted people as well as researchers to investigate their pharmacological and therapeutic activities [66-76].

It should be noted that rheumatoid arthritis is associated with imflammation and pain and the presented plants have anti-inflammatory activities. A lot of other diseases are also associated with inflammation [77-81]. Hence, these plants which have anti-inflammatory activities might be effective on some other diseases which are associated with inflammation. Moreover, as it was said these plants, in part, were probably effective by their antioxidant activities. Therefore, other plants which have antioxidant activity [82-92] may also be effective on rheumatoid arthritis.

CONCLUSION

Consequently, effective natural drugs can be produced to treat rheumatoid arthritis in case of proving their effectiveness after performing a pharmacological study on them.

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