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Plants used in traditional treatment against hemorrhoids in Turkey

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ABSTRACT: Due to its geographic location, variable climate and traditional culture, Turkey has a rich flora and the use of plants in folk medicine is very favorable. That practice and knowledge have been passed down from generation to generation. Ethnobotanical surveys are carried out to record traditional treatment methods of plants. In this study, which was prepared by screening of ethnobotanical researches made in Turkey, 241 taxa were recorded in the traditional treatment of hemorrhoids. Information about scientific and local names, families, used parts and usage patterns of these plants are given. According to the research results, the most commonly used plants in hemorrhoid treatment are plants belonging to Asteraceae, Lamiaceae, Rosaceae, Scrophulariaceae, Araceae, Polygonaceae and Cupressaceae families. The species commonly used in different regions of Turkey are *Achillea* sp., *Arum* sp., *Cichorium intybus* L., *Dracunculus vulgaris* Schott, *Ecballium elaterium* (L.) A. Rich., *Ficus carica* L., *Hypericum perforatum* L., *H. scabrum* L., *Juglans regia* L., *Peganum harmala* L., *Rosa canina* L., *Rubus* sp., *Sambucus ebulus* L., *S. nigra* L., *Teucrium polium* L., *Urtica dioica* L., *Verbascum* sp..

KEYWORDS: Hemorrhoids; Traditional treatment; Medicinal plants; Turkey.

1. INTRODUCTION

Hemorrhoids are swollen veins located around the anus or in the lower rectum. About 50 percent of adults experienced the symptoms of hemorrhoids by the age of 50. Hemorrhoids can either be internal or external. Internal hemorrhoids develop within the anus or rectum. External hemorrhoids develop outside of the anus. External hemorrhoids are the most common and most troublesome. Symptoms of hemorrhoids include irritation, pain and extreme itching around the anus, itchy or painful lump or swelling near anus, fecal leakage, painful bowel movements, blood on tissue after having a bowel movement. Possible hemorrhoids causes include straining during a bowel movement, complications from chronic constipation, sitting for a long period of time (especially on the toilet), pregnancy, obesity, a family history of hemorrhoids [1].

It is aimed to correct the underlying cause in hemorrhoid treatment. In simple cases, a fibrous diet, drinking a lot of water, local anesthetic creams for itching and pain are preferred. In symptomatic cases, treatments such as drug treatment, burning with infrared coagulant, tape-choking method, hemorrhoidal artery tying method are applied. In case progression of the disease, severe external and thrombosed hemorrhoids, definitive treatment is surgery [2].

Due to various side effects, drug interactions and high cost in synthetic drugs, interest in herbal medicines is increasing day by day. Among the population, the variety of plants used against hemorrhoids is quite high. In this study, 241 taxa were obtained against various hemorrhoids in various regions of Turkey. Scientific names, families, local names, used parts and usage of these taxa are shown in Table 1. This study includes ethnobotanical surveys made after 2004. The surveys prepared before 2004 were reported by Gürhan and Ezer [3].

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Table 1. The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Achillea aleppica DC. var. *zederbaueri* (Hayek) Hub.-Mor.	Asteraceae	Yılan çiçeği	Leaf, Flower	Crushed, Ext.	[4]
A. coarctata Poir.	Asteraceae	Mayasıl otu	Aerial part	Dried, Inf., Int.	[5]
A. bieberstenii Afan.	Asteraceae	Arı çiçeği, Sarı papatya, Erkurtaran	Aerial part	Inf., Int. Dec., Sediment Ext.	[6] [7]
A. millefolium L.	Asteraceae	Civanperçemi, Akbaşlı, Barsam otu	Leaf, Flower Aerial part	Inf., Int. Dec., Ext.	[8; 9] [10]
A. millefolium L. subsp. *millefolium*	Asteraceae	Beyaz civanperçemi, Binbir yaprak	Aerial part	Dried, Chipped off, +Honey, Eaten	[11; 12]
A. millefolium L. subsp. *pannonica* (Schelek) Hayek	Asteraceae	Civanperçemi, Dişotu, Ayvadana	Aerial part	Dec., Int.	[13]
A. nobilis L. subsp. *neilreichii* (Kerner) Formanek	Asteraceae	Mayasıl otu	Capitulum	Inf., Int.	(14)
A. nobilis L. subsp. *sipylea* (O.Schwarz) Bassler	Asteraceae	Kaba fesleğen, Mayasıl otu	Aerial part	Inf., Int.	[14]
A. phyrgia Boiss.&Bal.	Asteraceae	Ayvadana	Flower	Dried, Inf., Ext.	[15; 16]
A. wilhemsii C.Koch.	Asteraceae	Civanperçemi	Leaf Aerial part	Inf., Int. Dec., Ext.	[17; 18] [19]
Aesculus hippocastanum L.	Hippocastanaceae	At kestanesi	Seed	Not stated	[15; 16]
Aesculus sp.	Sapindaceae	At kestanesi	Seed	Crushed, Eaten	[20; 21]
Ajuga chamaepitys (L.) Schreber subsp. *chia* (Schreber) Arcangeli var. *chai*	Lamiaceae	Acı gıcı, Mayasıl otu, Kısa mahmutcuk	Aerial part Flower	Inf., Int. Dec., Int. Inf., Int.	[22] [19; 23] [17]
A. chamaepitys (L.) Schreber subsp. *chia* (Schreber) Arcangeli var. *ciliata* Brig.	Lamiaceae	Mayasıl otu	Flower Aerial part	Inf., Int. Dec., Int.	[24] [25]
A. chamaepitys (L.) Schreber subsp. *laevigata* (Banks Et Sol.) P.H.Davis	Lamiaceae	Mayasıl otu	Flower, Aerial part	Dec., Int.	[21]
Ajuga sp.	Lamiaceae	Mayasıl otu	Flower	Inf., Int.	[20]
A. orientalis L.	Lamiaceae	Mayasıl otu	Whole plant Flower	Dried, Dec. +*Mentha longifolium* L. subsp. *longifolium* (yarpuz) roots, Dec.	[26]
Alkanna tinctoria (L.) Tausch subsp. *glandulosa* Hub.-Mor.	Boraginaceae	Havacıva otu	Root	Dec., Int. and Ext.	[27]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Allium cepa L.	Liliaceae	Soğan	Tuber	Heated and Crushed, Ext.	[13]
A. porrum L.	Liliaceae	Pırasa	Seed	Inf., Int.	[28]
A. sativum L.	Liliaceae	Sarımsak	Tuber	Swallowed	[29; 30]
Alnus glutinosa (L.) Gaertn subsp. *barbata* (C.A.Mey.) Yalt.	Betulaceae	Sakallı kızılağaç	Seed Seed, Root	Crushed +Honey, Eaten Dec., Int.	[11; 12] [31]
A. glutinosa (L.) Gaertn subsp. *glutinosa*	Betulaceae	Kızılağaç	Male flower	Dec., Ext.	[32]
Amaranthus retroflexus L.	Amaranthaceae	Selmik	Leaf, Branch	Inf., Int.	[17]
Anethum graveolens L.	Apiaceae	Dere otu	Whole plant, Seed Seed, Leaf	Dec. Raw, Eaten	[26] [33]
Anthemis altissima L.	Asteraceae	Papatya	Flower	Inf.	[9]
A. cotula L.	Asteraceae	Papatya, Yoğurt çiçeği	Flower	Dec., Sediment Ext.	[7]
A. nobilis L.	Asteraceae	Papatya	Flower	Inf.	[9]
Anthemis sp.	Asteraceae	Papatya	Flowering and leafy branch	Dec., Int.	[34]
A. tinctoria L. var. *tinctoria*	Asteraceae	Papatya	Flowering and leafy branch Aerial part Flower	Dec., Int. Boiled, Ext. Inf.	[35] [13] [9]
Asphodelus aestivus Brot.	Liliaceae	Çiriş ağusu, Kiriş, Givriş, Hıdırellez kamçısı, Nünü	Root	Raw, Sucked in Ext. Dec., Int.	[36; 37] [14]
Asplenium adiantum-nigrum L.	Aspleniaceae	Mayasıl otu	Leaf	Inf., Int.	[14]
A. trichomanes L.	Aspleniaceae	Duvar bilonsi	Aerial part	Not stated	[12]
Arctium minus (Hill.) Bernh. subsp. *pubens* (Bab.) Arenes	Asteraceae	Deve pıtrağı, Kaba döşeği, Pıtrak	Leaf	Raw, Ext.	[38; 40; 41]
A. minus (Hill.) Bernh. subsp. *minus*	Asteraceae	Nallı pıtrak, Pıtrak, Bıtrak	Leaf	Raw, Ext.	[42]
Aristolochia bottae Jaub. & Spach.	Aristolochiaceae	Not stated	Aerial part	Dec., Int.	[43]
Arum detruncatum (C.A.Meyer ex Schott.) subsp. *detruncatum*	Araceae	Yılan ekmeği, Yılan yastığı	Tuber	Like a pill, Swallowed	[4]
A. dioscoridis SM.	Araceae	Kabarcık, Ağı	Fruit	Mature, Swallowed	[44]
A. dioscoridis SM. var. *luschanii* R. Mill.	Araceae	Pancar, Yılan pancarı	Seed Fruit	Dec., Int. Inf., Int.	[20] [21]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
A. elongatum Steven subsp. *detruncatum* (C.A.Mey. ex Schott) H. Riedl	Araceae	Gabarcık, Kabarcık	Fruit	Swallowed	[45; 46]
A. elongatum Steven subsp. *elongatum* Steven	Araceae	Basur otu, Yılan yastığı	Tuber	Small part with bread, Swallowed	[27]
A. italicum Miller	Araceae	Flower otu, Yılan yastığı, Yılan otu, Zehir otu, Yılan soğanı, Yılan kılıcı, Yılancık, Domuz yandıran	Fruit Tuber Flower	Swallowed Like a pill, Swallowed Inf. Dec., Int.	[32; 47; 48] [49] [32]
A. maculatum L.	Araceae	Tirşik, Andırın doktoru, Pancar, Yılan ekmeği	Tuber Fruit	Crushed, Int. Dec., Int. Mature, Eaten Mature, Crushed, +Flour, Eaten	[24; 50] [13] [51] [52]
Artemisia absinthium L.	Asteraceae	Acı yavşan, Pelin otu	Aerial part Root Whole plant	+Ethanol, Mac. Without Shell, Swallowed Dec. and Inf., Int. Dec., Ext.	[53] [54]
Asplenium trichomanes L.	Aspleniaceae	Saçak otu	Leaf	*Achillea millefolium* L. and *Nasturtium officinale* R.Br. leaves, +Egg, Cooked, Eaten	[11]
Berberis crataegina DC.	Berberidaceae	Zirinç, Karamuk	Root	Dec., Int. Inf., Int.	[19] [55]
Beta corolliflora Zosimovic ex Butler	Chenopodiaceae	Kızılca, Yabani ıspanak, Sırk	Root	Dec., Int.	[19; 22]
Bryonia multiflora Boiss. & Heldr.	Cucurbitaceae	Abdulselam, Akasma kökü	Root	Dec., Int.	[40]
Caltha polypetala Hochst.	Ranunculaceae	Lilipar	Flower	Dec.	[26]
Capparis ovata Desf.	Capparaceae	Gevil, Kafari	Root	Dec., Int.	[44]
C. spinosa L.	Capparaceae	Keper	Fruit	Dec., Int.	[19]
C. spinosa L. var. *spinosa*	Capparaceae	Kapari, Keditırnağı	Root	Dec., Int.	[33]
Capsella bursa-pastoris (L.) Medik	Brassicaceae	Kuşkuş otu, Çoban çantası	Leaf, Flower	Inf.	[49]
Cardamine raphanifolia Pourr.	Brassicaceae	Mayasıl otu, Kuş lahanası	Whole plant	Eaten	[56]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Carduus acanthoides L. subsp. *acanthoides*	Asteraceae	Küçük kenger	Aerial part	Dec., Int.	[13]
C. nutans L. subsp. *leiophyllus* (Petr.) Stoj. et Stef.	Asteraceae	Deve dikeni, Çakır dikeni, Eşek gengeri	Aerial part	Dec., Int.	[13]
Castanea sativa Miller	Fagaceae	Kestane	Stem bark, Fruit	Inf., Int.	[57]
Caucalis platycarpos L.	Apiaceae	Kara pıtrak	Aerial part	Dec., Int.	[58]
Centaurea depressa Bieb.	Asteraceae	Peygamber çiçeği	Aerial part	Dec., Int.	[6]
C. solstitialis L. subsp. *solstitialis*	Asteraceae	Çakır dikeni	Aerial part	Dec., Int.	[59]
Centaurium erythraea Rafn.	Gentianaceae	Mayasıl otu, Afyonotu, Kırmızı kantaron	Aerial part	Crushed, +Honey, Eaten. +*Juglans regia L.* leaves and *Mentha* sp. Dec., Ext. Dried, Cooked, with Gripin capsule, Swallowed	[28] [47]
C. erythraea Roth. subsp. *turcicum* (Velen.)	Gentianaceae	Küçük kantaron	Aerial part	Dec., Int.	[11; 12]
Ceterach officinarum DC.	Aspleniaceae	Altın otu	Leaf Leaf, Flower	Crushed and Ext. Inf.	[7] [49]
Chelidonium majus L.	Papaveraceae	Kurlangıç otu, Temre otu	Aerial part	Inf., Int.	[27]
Chenopodium album L. subsp. *album* var. *album*	Chenopodiaceae	Sılmık	Aerial part	Dec., Int.	[6]
Cichorium intybus L.	Asteraceae	Acı ot, Keklik otu, Talışk, Acıkök, Çıtlık, Çukurca, Yabani hindiba, Hindiba, Sakız otu, Mavihindiba, Radika	Capitulum Leaf Leaf and stem Aerial part Rosette leaf and root	Dec., Int. Boiled, Ext. +*Cucumis sativus* L. fruit shell, Inf., Int. Dec., and Cooed, Int. Inf., Ext. Not stated	[6] [30] [60] [47] [61] [23]
Cirsium arvense (L.) Scop. subsp. *vestitum* (Wimm. & Grab.) Petr.	Asteraceae	Çakır dikeni	Root	Dec., Int.	[19]
Cnicus benedictus L.	Asteraceae	Şevketi bostan, Mayasıl otu	Aerial part	Inf., Int.	[62]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Convolvulus arvensis L.	Convolvulaceae	Dağ sarmaşığı, Basırık, Mahmude otu	Root Branch and leaf	Latex, Dried, Swallowed Dec., Ext.	[63] [7]
Cotinus coggygria Scop.	Anacardiaceae	Tetra	Leaf	Dec., Ext.	[13; 32]
Crataegus meyeri Pojark	Rosaceae	Alıç	Flower	Inf., Ext.	[61]
C. monogyna Jacq. subsp. *monogyna*	Rosaceae	Kizlarkörü, Kizilçöğür, Memişen	Fruit	Eaten	[64]
Crepis zacintha (L.) Babcock	Asteraceae	Mayasıl otu	Whole plant	Dec., Int.	[13]
Cupressus sempervirens L.	Cupressaceae	Selvi	Cone	Dec., Int.	[62; 65]
C. sempervirens L. var. *horizontalis*	Cupressaceae	Servi	Cone	Dec.	[49]
Cydonia oblonga Miller	Rosaceae	Ayva	Leaf	Dried Crushed, Inf., Int.	[32]
Cynodon dactylon (L.) Pers. var. *dactylon*	Poaceae	Beygir otu, Ayrıkotu	Whole plant Aerial part	Dec., Int. +*Equisetum* sp., Dec., Int.	[47]
Daphne sericea Vahl.	Thymelaeaceae	Zveytine, Dafne	Whole plant	Crushed, +Olive oil, Ext.	[20; 21]
Datura stramonium L.	Solanaceae	Afyonotu, Eşek dikeni	Seed	Swallowed	[47]
Daucus carota L.	Apiaceae	Arnamus otu, Kokar otu, Mayasıl otu	Aerial part	Inf., Int.	[14]
Dianthus zonatus Fenzl. var. *aristatus* (Boiss.) Reeve	Caryophyllaceae	Basur otu	Flower	Inf., Int.	[27]
Dorycnium graecum (L.) Ser.	Fabaceae	Dağ tifili	Flower	Dec., Int.	[66]
Dracunculus vulgaris Schott	Araceae	Yılan pancarı, Yılan ebesi, Yılan burçağı, Yılan otu, Yılan yastığı, Domuz şekeri, Kabarcık, Yılan kamçısı, Yılan mısırı	Fruit Root Aerial part Tuber and seed	Mature, +Flour, Swallowed Eaten Like a pill, Swallowed +Olive oil, Dec. Eaten	[14; 42; 62; 65] [33; 64] [5] [67] [68]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Ecballium elaterium (L.) A.Rich.	Cucurbitaceae	Yaban kavunu, Cırtlatan, Eşek hıyarı, Acı dülek, Acı kavun, Deli kavun, Şeytan keleği, Düvelek	Fruit Root	Sap, Ext. Crushed, Latex +Flour, Like a pill, Eaten Crushed, Like a pill, Eaten Without shell, Like a pill, Swallowed Sliced, Ext.	[20; 21] [13; 69] [13; 32; 65] [62]
Echinops orientalis Trautv.	Asteraceae	Eşek kengeri	Flower	Dec., Int.	[6]
Equisetum arvense L.	Equisetaceae	Kırk kilit otu, Ulama otu, Ek otu, At kuyruğu, Çam otu	Stem and leaf Whole plant	Not stated Dec., Ext.	[8] [54]
Eryngium campestre L.	Apiaceae	Şeker dikeni	Root	Raw, Eaten.	[70]
E. campestre L. var. *virens* Link	Apiaceae	Eşek kengeri	Root	Dec., Int.	[6]
Euphorbia cardiophylla Boiss.et Heldr.	Euphorbiaceae	Sütleğen	Latex	Ext.	[29]
E. kotschyana Fenzl	Euphorbiaceae	Sütleğen	Latex	Ext.	[71]
E. macroclada Boiss.	Euphorbiaceae	Sütleğen	Latex	Dried, Like a pill, Swallowed	[53]
E. seguieriana Necker	Euphorbiaceae	Yumru sütleğen	Latex	Ext.	[29]
Ferula orientalis L.	Apiaceae	Helız, Çakşır otu	Root Aerial part	Dec., Int. Dec., Int.	[72] [17]
Ferula sp.	Apiaceae	Çaşır	Root, Leaf	Dec., Int.	[73]
Ficus carica L.	Moraceae	İncir, Yemiş	Leaf Fruit, Leaf Fruit	Inf., Int. Dec., Int. Dec., Ext. Raw, Ext. Eaten, Compote, Int.	[74] [10; 75] [32] [10] [76]
F. carica L. subsp. *carica*	Moraceae	Deli yemiş, İncir, Yemiş	Young branches	Inf., Int.	[64]
Fragaria vesca L.	Rosaceae	Dağ çileği	Root	Dec., Ext.	[54]
Fumaria asepala Boiss.	Papaveraceae	Şahdere	Whole plant Flower, Leaf	Dec., Int. Dec., Ext.	[6] [18]
F. cilicica Hausskn.	Papaveraceae	Şahdere	Whole plant	Dec., Int.	[6]
F. orientalis L.	Papaveraceae	Şahtere	Whole plant	Dec., Int. and Ext.	[26]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Galium consanguieum Boiss.	Rubiaceae	Babelisk	Aerial part	Ext.	[40]
G. runcinatum Ehrend et Schönb.-Tem.	Rubiaceae	Yapışkan sarmaşık	Aerial part	Dec., Int.	[6]
Glycyrrhiza echinata L.	Fabaceae	Acı meyan	Root	Dec., Int.	[20; 21]
Gundelia tournefortii L. var. *tournefortii*	Asteraceae	Kenger	Fruit	Dried, Eaten.	[27]
Heracleum platytaenium Boiss.	Apiaceae	Ayı göbeği, Tavşan otu, Su pıtrağı otu	Aerial part	+*Verbascum* sp. aeril part, Inf., Enema	[42; 77]
Hyacinthus orientalis L. subsp. *chionophilus* Wendelbo	Liliaceae	Sümbül	Leaf	Crushed, Ext.	[19]
Hypericum montbretii Spach	Hypericaceae	Çay çiçeği, Çay otu	Flowering branch	Dec., Int.	[19; 22]
H. orientale L.	Hypericaceae	Kırmızı kantaron	Aerial part	Inf., Int.	[4]
H. perforatum L.	Hypericaceae	Kantaron, Sarı kantaron, Mayasıl otu, Kızılcık otu	Flower, Aerial part Whole plant Flowering branch	+Olive oil, Mac., Ext. Crushed, +Olive oil, Ext. +*Salix alba* L. leaves, Dec., Ext. Dec., Int. Oil, Int.	[74] [4] [63] [19; 22; 23; 78] [64]
H. scabrum L.	Hypericaceae	Kantaron otu, Sarı kantaron, Serkil otu, Mayasıl otu, Kepir otu, Kızılcık otu	Fruit Aerial part Whole plant Leaf, Flower	Inf., Int. Inf., Int. Dec., Int. Inf., Ext. Dec., Int. Dec. and Inf., Int., Ext.	[30] [4] [19] [18] [79] [61]
Inula anatolica Boiss.	Asteraceae	Basur otu	Flower	Dec., Ext.	[27]
I. helenium L. subsp. *vanesis* Grierson	Asteraceae	Andız otu, İngüz, Peniruk	Aerial part Leaf	Dried, Crushed, +Vaseline, Ext. Raw, Ext.	[40; 41]
Ixiolirion tataricum (Pall.) Schult. & Schult.f. subsp. *montanum* (Labill.)Takht.	Amaryllidaceae	Enjurok	Fruit	Eaten	[80]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Juglans regia L.	Juglandaceae	Ceviz, Giz, Güz, Koz	Seed	Crushed, +Honey, Heated, Ext.	[38; 40]
			Leaf	+Aerial part of *Centaurium erythraea* Rafn. and *Mentha* sp., Dec., Ext.	[28]
				Dec., Int.	[71; 81]
				Dec., Ext.	[19; 34; 71]
			Fruit	Swallowed	[60]
				Eaten	[13; 31; 34; 57]
				Mature endocarp, +Honey, Eaten.	[47]
				Crushed, +Honey, Eaten.	[14]
Juniperus drupacea Lab.	Cupressaceae	Andızağacı, Andız	Fruit	Molasses, Int.	[52; 82]
J. excelsa Bieb.	Cupressaceae	Ardıç	Fruit	Dec., Ext.	[19]
J. oxycedrus L.	Cupressaceae	Ardıç, Dikenli ardıç, Katran ardıcı	Tar	Like a pill, Swallowed and Ext.	[62; 65]
			Cone	Dec., Int.	[15]
			Seed	Roasted, Crushed, Int.	[32]
J. oxycedrus L. subsp. *oxycedrus*	Cupressaceae	Ardıç	Fruit	Eaten	[68]
				Inf., Int.	
			Cone	Dec., Int.	[16]
Lactuca serriola L.	Asteraceae	Hindiba, Kaju	Aerial part	Inf., Int.	[61]
Lactuca sp.	Asteraceae	Hindiba, Kaju	Stem	Inf., Int.	[60]
Lauracerasus officinalis Roemer	Rosaceae	Kastanicça karamişi	Seed	Crushed, Eaten.	[56]
			Leaf	Cooked, Ext.	
Laurus nobilis L.	Lauraceae	Defne	Oil	Ext.	[20; 21]
			Leaf	Dec., Int.	[68]
Leontice leontopetalum L. subsp. *leontopetalum*	Berberidaceae	Patlangaç	Tuber	Sliced, Like a pill, Swallowed	[69]
Linaria genistifolia (L.) Miller subsp. *genistifolia*	Scrophulariaceae	Not stated	Aerial part	Dec., Int.	[6]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
L. kurdica Boiss. et Hohen. subsp. *kurdica*	Scrophulariaceae	Not stated	Aerial part	Dec., Int.	[6]
Liquidambar orientalis Miller	Hamamelidaceae	Günlük ağacı	Kortex	Balsam	[49]
Lotus corniculatus L. var. *corniculatus* (Bieb.) Arc.	Fabaceae	Yonca, Sancı otu, Böbrek otu	Aerial part	Dec., Int.	[19; 22]
Malabaila dasyantha (C. Koch) Grossh	Apiaceae	Mandak	Leaf	Dried or fresh, Ext.	[72]
Malva neglecta Wallr.	Malvaceae	Ebe gömeci, Ebe gümeci, Ebem gömeci, Ebem kömenci	Leaf Aerial part Root, Seed, Leaf	Dec., Int. Dec., Int. Crushed, Ext. +*Plantago major* leaves, Dec.	[30; 83] [17; 18; 70] [55] [26]
M. sylvestris L.	Malvaceae	Ebegümeci	Aerial part	Dec., Ext.	[13]
Marrubium parviflorum Fisch. & C.A. Mey. subsp. *parviflorum*	Lamiaceae	Not stated	Whole plant	Dec., Ext.	[54]
Matricaria chamomilla L.	Asteraceae	Papatya	Flower	Inf.	[49]
Melia azedarach L.	Meliaceae	Tespih ağacı, Zinzra	Fruit	Boiled, Crushed, +leblebi, Mush, Like a pill, Swallowed	[20; 21]
Mentha longifolia L. ssp. *longifolia*	Lamiaceae	Yarpuz, Yarbuz, Punk	Leaf, Root Aerial part	+*Camelia sinensis*, Inf., Ext. Dec. and Inf., Int.	[26] [19]
Morus nigra L.	Moraceae	Karadut	Stem bark	Peeled, Like a pill, Swallowed	[32]
Nasturtium officinale R.Br.	Brassicaceae	Su teresi	Aerial part	Raw, Eaten	[11; 12]
Nepeta trachonitica Post	Lamiaceae	Dağ çayı	Aerial part	Inf., Int.	[6]
Nerium oleander L.	Apocynaceae	Zakkum, Difli	Flower	Crushed +butter, Ext.	[20; 21]
Onopordum acanthium L.	Asteraceae	Kivar	Flower	Dec., Int.	[31; 38]
O. bracteatum Boiss. et Heldr. var. *bracteatum* Boiss. et Heldr.	Asteraceae	Kangal	Seed	+Honey, Eaten	[19; 29]
O. candidum Nab.	Asteraceae	Kangal	Fruit	Crushed, Dec., Int.	[6]
Onosma argentatum Hub.-Mor.	Boraginaceae	Emzik	Aerial part	Dec., Int.	[6]
Orchis punctulata Steven Ex Lindley	Orchidaceae	Sahlep, Salep çiçeği, Sümbül	Tuber	Dec., Int.	[6]
Origanum onites L.	Lamiaceae	Kekik	Oil	Ext.	[84]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Paliurus spina-cristi Miller	Rhamnaceae	Arı çalısı, Kara çalı, Çaltı	Fruit Seed	Crushed, Dec., Int. Crushed, Inf., Int.	[6; 44] [24]
Papaver rhoeas L.	Papaveraceae	Gelincik	Flower	Dec., Int.	[32]
Peganum harmala L.	Zygophyllaceae	Üzerlik, Harmal, Boğir, Bohal meleç, Yabani sedef otu, İlezik, Nazar otu	Aerial part Fruit Seed Root	Dec., Ext. Burned, Cinder +Barley flour and olive oil, Ext. Swallowed Dried, Crushed and Roasted, Eaten Crushed, +Honey, Eaten Roasted, Crushed, Eaten Dec., Int. +Oil, Eaten Chewed, Eaten Crushed, Ext. Dec., Int.	[63] [78] [68; 85] [78] [4; 65; 71] [19; 23] [62] [76] [57] [19; 86]
Petroselinum arispum (Mill.) A.W.Hill	Apiaceae	Maydanoz, Maydenüs	Aerial part Stem and petiole	Dec., Int. Dec., Sediment Ext.	[87] [7]
Phallaris arundinaceae L.	Poaceae	Kaynaşı	Root	Dec., Int.	[84]
Phyllitis scolopendirum (L.) Newn.	Aspleniaceae	Geyikdili eğreltisi	Aerial part	+*Viscum album* L., *Asplenium trichomanes* L., *Plantago major* L. subsp. *major* and *Urtica dioica* L. leaves, Dec., Int.	[11; 12]
Picris strigosa Bieb.	Asteraceae	Senameki	Root	Mush, Ext.	[19]
Pinus brutia Ten.	Pinaceae	Kızılçam	Flower	Crushed, +Water, Drinked	[16]
Pistacia terebinthus L. subsp. *terebinthus*	Anacardiaceae	Kokorağaç, Menengiç ağacı	Leaf	Dec., Int.	[13]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Plantago lanceolata L.	Plantaginaceae	Giyamambel, Belpanık, Sinir otu, Sinirli ot, Yılan dili, Yılan otu	Leaf Seed	Raw, Eaten Dec., Int. Dried, Crushed, +Honey, Eaten Crushed, Dec.	[38] [40] [78] [32]
P. major L.	Plantaginaceae	Sinir otu, Sinirli ot	Leaf	Burned, Ext.	[74]
P. major L. subsp. *intermedia* (Gilib.) Lange	Plantaginaceae	Sinir otu, Sinirli ot, Kesik otu, Bağa yaprağı, Kırkdamar otu	Fruit Leaf	+Honey, Eaten Inf., Ext. Soup, Drinked Grated, Crushed, Ext.	[5] [19; 22] [67]
P. major L. subsp. *major*	Plantaginaceae	Sinir otu	Aerial part Seed Leaf	Dried, Dec. and Inf., Int. Dried, Eaten Dec., Int. Dec., Ext.	[11] [56] [19] [18]
Platanus orientalis L.	Platanaceae	Ayı otu, Eğer otu, Kavak, Çınar	Leaf	Inf., Int.	[64]
Polygonum bistorta L.	Polygonaceae	Çimen eveleği	Aerial part	Dec., Int.	[11]
P. cognatum Meisn	Polygonaceae	Madımak, Madımalak	Whole plant	Int.	[29]
P. lapathifolium L.	Polygonaceae	Dereotu, Dere biberi, Deve sürdeği	Aerial part	Dec., Ext.	[13]
Populus tremula L.	Salicaceae	Kavak	Gemma Cortex	+Olive oil Dec., Int.	[29]
Potentilla reptans L.	Rosaceae	Reşadın otu	Leaf	Inf., Int.	[78]
Prunus persica (L.) Batsch.	Rosaceae	Şeftali	Seed	Swallowed	[74]
Pteridum aquilinum (L.) Kuhn	Dennstaedtiaceae	Kartal eğrisi	Leaf	Not stated	[88]
Pteris cretica L.	Pteridaceae	Girit eğreltisi	Root	+*Phedimus stoloniferus* (S.G.Gmel.), *Urtica dioica* L., *Hedera helix* L., *Ficus* L., *Laurocerasus* Duhamel, *Juglans* and *Alnus* leaves, Dec., Int.	[11]
Punica granatum L.	Punicaceae	Nar, Mekke gülü	Fruit bark	Dec., Int.	[8]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Quercus cerris L. var. *cerris*	Fagaceae	Kızılmeşe, Meşe	Fruit	Dec., Int.	[27]
Q. coccifera L.	Fagaceae	Meşe	Fruit, Gall, Leaf	Not stated	[15; 16]
Q. libani Oliver	Fagaceae	Meşe	Fruit	Eaten	[6]
Q. petraea (Mattuschka) Liebl. subsp. *pinnatiloba* (C.Koch) Menitsky	Fagaceae	Meşe	Fruit	Eaten	[6]
Ranunculus ficaria L.	Ranunculaceae	Basur otu	Root	Boiled, Mush, Ext.	[89]
R. ficaria L. subsp. *ficariiformis* Rouy et Fouc.	Ranunculaceae	Altın tabak, Düğün çiçeği, Basur otu, Sarı çiçek, Mayıs çiçeği	Rosette leaf Flower Root Aerial part	Mush Ext. Inf., Int. Crushed, Eaten Crushed, Ext.	[20] [27] [69] [21]
Reseda lutea L.	Resedaceae	Eşek gerdanası	Aerial part	Inf., Int.	[4]
Rheum ribes L.	Polygonaceae	Işgın, Işkın, Rives, Gavalak, Gavalat	Root	Dec., Int. Roasted, +Honey, Swallowed	[6; 19; 22; 86; 90] [91]
Rosa canina L.	Rosaceae	Kuşburnu, Şillan, Şilan, Yabani gül, Gül elması, Gülburnu, İtburnu	Flower, Fruit, Root Fruit Flower and Fruit Root	Not stated Dec., Int. Dried, Marmalade, Int. Raw, Eaten Dried, Eaten Inf., Int. and Ext. Dec., Int. Dec., Int. Dried cortex, Crushed and Dec., Int.	[89] [6; 19; 30; 64; 78] [27; 63] [68] [55] [31] [20; 21] [19; 32] [72]
R. dumalis Bechst. var. *boissieri* (Chepin) O. Nilsson	Rosaceae	Kuşburnu	Fruit	With seed, Eaten and Mush	[91]
R. montana Chaix subsp. *woronowii* (Lonacz.) Ö.Nilsson	Rosaceae	Kuşburnu	Fruit, Flower	Marmalade, juice and tea, Int.	[29]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
R. pimpinellifolia L.	Rosaceae	Koyungözü, Atgötü	Fruit	Dec., Int.	[19; 22]
R. villosa L. subsp. *mollis* (SM.) Keller et Gams	Rosaceae	Kıllı kuşburnu	Fruit, Flower	Marmalade, juice and tea, Int.	[29]
Rubus caesius L.	Rosaceae	Böğürtlen, Mora, Fuska dikeni, Pamuk dikeni, Handuka, Fiskofi	Fruit Root	Marmalade, Compote, Int. Cooked, Eaten	[29] [56]
R. canescens DC. var. *canescens*	Rosaceae	Böğürtlen	Leaf and Fruit	Dec., Int.	[23]
R. canescens var. *glabratus* (Godron) Davis et Meikle	Rosaceae	Böğürtlen, Mora	Fruit	Marmalade, Compote, Int.	[29]
R. discolor Wheihe & Nees.	Rosaceae	Böğürtlen	Root	Dec., Int.	[28]
R. sanctus Schreber	Rosaceae	Böğürtlen	Leaf and Flower Root	Crushed, Ext. Dec., Int.	[20; 21] [92]
R. saxatilis L.	Rosaceae	Böğürtlen, Mora	Fruit	Marmalade, Compote, Int.	[29]
Rumex crispus L.	Polygonaceae	Adem eveliği, Evelik	Leaf	Inf., Int. Crushed, Ext.	[19; 22] [86]
R. obtusifolius L. subsp. *subalpinus* (Schur) Celak.	Polygonaceae	Lapaza	Seed	Dried, Dec., Int.	[56]
R. patientia L.	Polygonaceae	Kuzukulağı	Fruit Leaf	Dec., Int. Inf., Int.	[6] [19]
Rumex sp.	Polygonaceae	Labada, İlibada	Seed	Dried, Dec., Ext.	[74]
Salix alba L.	Salicaceae	Söğüt	Leaf	+*Hypericum perforatum* L., Dec., Ext.	[63]
Salvia cryptantha Montbret et Aucher ex Bentham	Lamiaceae	Adaçayı, Çalba, Kayışkıran, Kokulu ot, Sarı şabla	Aerial part	Inf., Int.	[30; 83]
Sambucus ebulus L.	Caprifoliaceae	Mürver, Otsu mürver, Cüce mürver, Ayı boğan, Şahmelek otu, Sultan, Piran, Lüver, Lor, Memer	Fruit Seed Aerial part	Mature, Swallowed Eaten Dec., Int. Eaten Dec., Ext.	[11; 32; 93; 94] [47; 56] [13; 32] [24] [32]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
S. nigra L.	Caprifoliaceae	Patpatik, Mürver, Siyah mürver, Köpek üzümü, Lüver, Lor, Sultan, Piran, Piren, Sultanotu, Melikşah	Flower Fruit Seed	Inf., Int. Dec., Int. Mature, Swallowed Crushed, Ext. Dec., Enema Inf., Int.	[6] [13] [11; 47; 63] [57] [42; 77] [13]
Scolymus hispanicus L.	Asteraceae	Suluca diken	Root	Without shell, Crushed, Eaten	[58]
Scutelleria orientalis L. subsp. *pichleri* (Stapf.) Edmondson	Lamiaceae	Keselmahmut	Aerial part	Dried, Crushed, Dec., Int.	[38]
S. orientalis L. subsp. *virens* (Boiss. & Kotschy.) Edmondson	Lamiaceae	Keselmahmut	Aerial part	Dried, Crushed, Dec., Int.	[38]
Sideritis bilgeriana P.H.Davis	Lamiaceae	Boz şabla, Kekik çayı, Yayla çayı	Aerial part	Inf., Ext.	[4]
Silene saxatilis Sims	Caryophyllaceae	Mayasıl otu, Zembil, Gelin parmağı, Has pancarı	Leaf	Inf., Int.	[90]
S. vulgaris (Moench) Garcke	Caryophyllaceae	Mayasıl otu, Zembil, Gelin parmağı	Leaf	Inf., Int.	[90]
Silybum marianum L.	Asteraceae	Deve dikeni	Flower	Dried, Smoked Dec., Int.	[44]
Solanum melongena L.	Solanaceae	Patlıcan	Fruit stalk Root	Dec., Int. Burned, Embers, Ext.	[74] [52]
S. nigrum L.	Solanaceae	İt üzümü	Leaf, Flower and Sprout	Inf.	[49]
Sorbus aucuparia L.	Rosaceae	Üvez	Fruit	Raw, Eaten	[13]
Stachys arvensis L.	Lamiaceae	Karabaş, Koca soğulcan	Aerial part	Dried, Dec., Int.	[11; 12]
Telephium imperati L. subsp. *orientale* (Boiss.) Nyman	Caryophyllaceae	Mayasıl otu	Leaf	Dec., Ext.	[19; 86]
Terminalia chebula Retz.	Combretaceae	Karahelile	Seed	Not stated	[89; 95]
Teucrium chamaedrys L.	Lamiaceae	Kısa mahmut, Mayasıl otu, Sancı otu	Aerial part	Inf., Int.	[4]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
T. chamaedrys L. subsp. *chamaedrys*	Lamiaceae	Bodurmahmut, Sancı otu, Çoban sargısı, Kısacık mahmut, Mayasıl otu	Leaf, Flower Aerial part	Inf., Int. Crushed, Inf., and Dec., Int. Dec., Int. and Ext.	[27] [32; 53] [78]
T. chamaedrys L. subsp. *sinuatum* (Celak.) Rech. Fil.	Lamiaceae	Dağ kekiği	Aerial part	Inf., Int.	[6]
T. chamaedrys L. subsp. *tauricolum* Rech. Fil.	Lamiaceae	Dağ kekiği	Aerial part	Inf., Int.	[24]
T. parviflorum Schreber	Lamiaceae	Dağ kekiği	Aerial part	Dec., Int.	[6; 19]
T. polium L.	Lamiaceae	Yavşan, Mayasıl otu, Acı ot, Ak sedef otu, Basur otu, Meryem otu, Sancı otu, Koyun otu, Bozot, Acı yavşan, Oğlan otu, Oğul otu, Peryavşan, Tiksinik otu	Leaf, Branch and Flower Stem Aerial part	Inf., Int. Dec., Int. and Ext. Dried, Dec., Int. Dried, Crushed, +*Vitis vinifera* L. fruits, Eaten Dec., Ext. Inf., Int. Crushed, +Honey, Eaten	[79; 82; 89] [27] [19; 71; 78; 96] [96] [44; 78] [14; 55; 64] [64]
Thuja arborvitae L.	Cupressaceae	Mazı	Leaf	Not stated	[89]
Thymus fallax Fisch. & C.A. Mey.	Lamiaceae	Catri	Leafy young branch Leaf	Dec., Int. Raw, Eaten,Ext.	[72]
T. leucostomus Hausskn. & Velen. var. *leucostomus*	Lamiaceae	Paryavşan, Kekik	Aerial part	Inf., Int.	[70]
Thymus sp.	Lamiaceae	Kekik, Kesik otu	Aerial part	Dec., Int.	[28]
Tribulus terrestis L.	Zygophyllaceae	Deve çökerten, Demir dikeni, Deve dikeni, Çoban çökerten	Aerial part Oil Leaf and Fruit	Dec., Int. Dec. and Inf., Int. Ext. Inf., Int.	[8] [33] [27] [49; 61]
Trifolium ambiguum Bieb.	Fabaceae	Alma otu, Eşek yoncası, Üç kulak otu	Aerial part	Dec., Int.	[22; 19]
Trigonella foenum-graecum L.	Fabaceae	Çemen	Seed	Oil	[76]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
Ulmus minor Miller subsp. *canescens* (Melville) Browicz et Zielinski	Ulmaceae	Kara ağaç	Root	Shell, Dec., +Wheat, Mush, Ext.	[30]
Urtica dioica L.	Urticaceae	Isırgan otu, Kırros, Isırgan, Acı ısırgan, Büyük ısırgan otu, Sırgan, Erkek çakır, Eşek çakırı, Eşek ısırganı, Dalagan, Gizirkan, Deli ısırgan	Aerial part Seed Leaf Whole plant	Dec., Int. Dried, Inf., Int. and Ext., Enema Inf., Int. +*Mentha longifolia* (L.) Huds., Dec., Int. and Ext. +Honey, Eaten +*Phyllitis scolopendrium* (L.) Newn., Dec., +Honey, Int. Dec., Int. Dec. and Inf., Int.	[13; 20; 21; 28] [42] [14; 31; 42] [78] [29] [11] [62] [61]
Urtica sp.	Urticaceae	Isırgan	Seed	Inf., Int.	[60]
Verbascum cheiranthifolium Boiss. var. *cheiranthifolium*	Scrophulariaceae	Balık otu, Sığırkuyruğu	Leaf Aerial part Flower and Sprout Root and Base leaf	Dec., Int. Ext. Dec., Int. Dried, Dec., Int. Dried, Crushed, Dec., Int.	[6] [38] [71; 81] [96]
V. dudleyanum (Hub.-Mor.) Hub.- Mor.	Scrophulariaceae	Sığırkuyruğu	Flower, Leaf	+Sugar, Dec.	[26]
V. glomeratum Boiss.	Scrophulariaceae	Sığırkuyruğu	Leaf and Flower	Inf. and Dec., Int.	[53]
V. lasianthum Boiss. et Bentham	Scrophulariaceae	Sığırkuyruğu, Yalangı, Yılangı	Flower Root	Inf., Int. Dried, Crushed +Raisins, Eaten	[30; 83] [43]
V. oreophilum C.Koch var. *joannis* (Bordz.) Hub.-Mor.	Scrophulariaceae	Masicerk	Aerial part	Dec., Int.	[38]
V. pyramidatum M. Bieb.	Scrophulariaceae	Masicerk	Aerial part	Dec., Int.	[38]

Table 1 (*Continued*). The plants used in traditional treatment against hemorrhoids in Turkey.

Botanical name	Family	Local name	Plant part used	Preparation, administration and use	Ref.
V. sinuatum L. var. *adenosepalum* Murb.	Scrophulariaceae	Sığırkuyruğu	Leaf	Dec., Int.	[6]
Verbascum sp.	Scrophulariaceae	Sığırkuyruğu, Tozluk, Tozkulak, Calba	Aerial part Flower	+Tavşan otu (*Heracleum platytaenium* Boiss.) aerial part, Inf., Enema Inf. and Mush Int. Dec., Sediment Ext.	[42] [33] [7]
V. speciosum Schrader	Scrophulariaceae	Kabalak, Ayılahanası	Flower Root	Inf., Int. Like a pill Swallowed	[47]
V. thapsus L.	Scrophulariaceae	Sığırkuyruğu	Branch, Stem, Flower	Inf., Int.	[29]
Verbena officinalis L.	Verbenaceae	Basur otu, Basır otu	Aerial part	Dried, Crushed, Eaten Dec., Int. Raw, Eaten Ext.	[71]
Viscum album L.	Loranthaceae	Ökse otu, Gövelek, Gövem	Whole plant Leafy branch	Dec., Int. Dec. and Inf., Crushed, +Water, Mac.	[11] [53]
V. album L. subsp. *album*	Loranthaceae	Ökse otu, Yapışkan ot, Çeküm	Whole plant Leaf	Dec., Int. Inf., Int. Dried, Inf., Int. Dec., Ext.	[6] [64] [81] [19]
Vitex agnus-castus L.	Verbenaceae	Hayıt	Seed	Dec., Int.	[58]
Vitis sylvestris L.	Vitaceae	Asma, Üzüm	Fruit, Leaf	Raw and Dec., Int. and Ext.	[17]
V. vinifera L.	Vitaceae	Üzüm	Fruit	Swallowed	[64]
Xanthium strumarium L.	Asteraceae	Domuz pıtrağı	Fruit	Mush, Int.	[33]
Zea mays L.	Poaceae	Mısır, Lazut	Stylus	Dec., Int. Inf., Int.	[35] [86]

Int.: Internal, **Ext**.: External, **Dec**.: Decoction, **Inf**.: Infusion, **Mac**.: Maceration

2. MATERIALS AND METHODS

This study has been prepared by searching thesis at the National Higher Education Center and ethnobotanical surveys conducted in various parts of Turkey with selecting regional plants used for hemorrhoids treatment. Our study includes ethnobotanical surveys made after 2004. The surveys prepared before 2004 were reported by Gürhan G. and Ezer N. [3].

3. RESULTS

This study, prepared by screening of ethnobotanical researches, revealed 241 taxa belonging 62 families that were used against hemorrhoids among the population. These plants are mainly from Asteraceae (40 taxa), Lamiaceae (23 taxa), Rosaceae (19 taxa), Scrophulariaceae (12 taxa), Araceae (8 taxa), Polygonaceae (8 taxa) and Cupressaceae (7 taxa) (Figure 1). The most common species in ethnobotanical studies in different parts of Turkey are *Achillea* sp., *Arum* sp., *Cichorium intybus* L., *Dracunculus vulgaris* Schott, *Ecballium elaterium* (L.) A. Rich., *Ficus carica* L., *Hypericum perforatum* L., *H. scabrum* L., *Juglans regia* L., *Peganum harmala* L., *Rosa canina* L., *Rubus* sp., *Sambucus ebulus* L., *S. nigra* L., *Teucrium polium* L., *Urtica dioica* L., *Verbascum* sp. Our study includes 178 different taxa than previously reported [3].

Plant parts such as leaves, flowers containing volatile oil are prepared as infusion; seeds, roots are prepared as decoction; or they are prepared in form a pill. These forms are used internally. It is used externally by preparing mush, sitting in its vapour or preparing a bath.

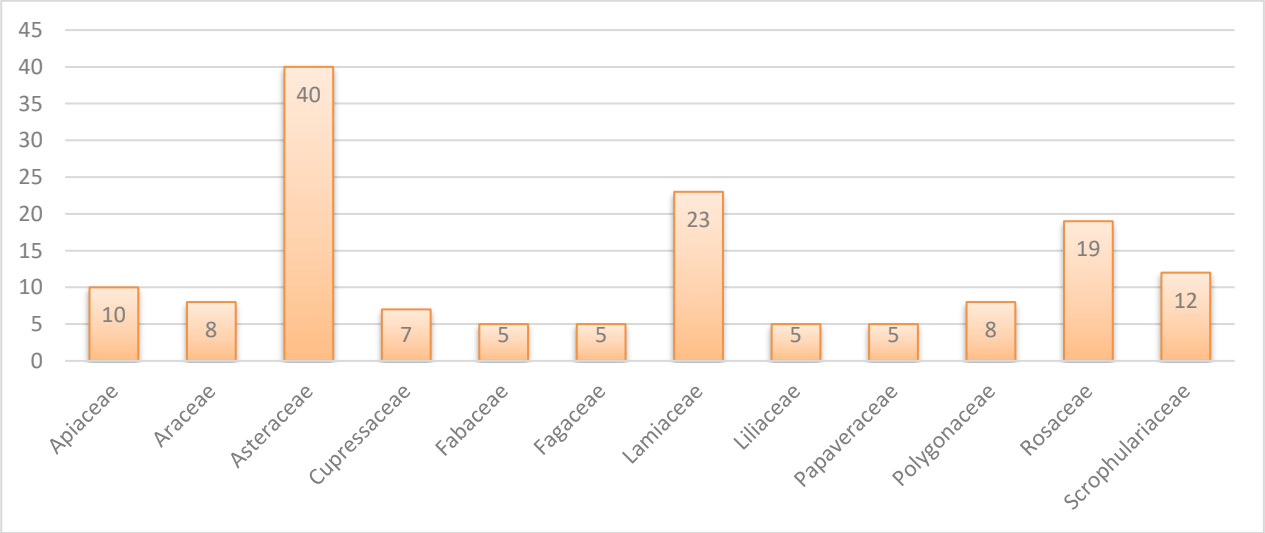

Figure 1. Main families used in traditional treatment against hemorrhoids in Turkey.

It is estimated that plants are used in hemorrhoids treatment because of their analgesic, antiinflammatory, antimicrobial, antiseptic, wound healing and vitamin P effects. Plants rich with flavonoid compounds (eg. *Sambucus* sp., *Rosa canina*, *Rubus* sp.) have vitamin P activity. Due to vitamin P effect, flavonoids strengthen the vessel walls, reduce capillary vascular permeability and prevent bleeding. Owing to this effect, capillary hemorrhages seen in hemorrhoids can be reduced. It is thought that hemorrhoid complaints can be healed with wound healing compounds (including plants eg. *Achillea* sp., *Arum* sp., *Dracunculus vulgaris*, *Ecballium elaterium*, *Ficus carica*, *Hypericum* sp.); analgesic, antiinflammatory compounds (including plants eg. *Salix alba*, *Cichorium intybus*); antimicrobial, antiseptic compounds (including plants eg. *Peganum harmala*, *Teucrium polium*, *Urtica dioica*, *Verbascum* sp.) [97; 98; 99; 100]. More detailed studies on the chemical components and biological activities of plants used in hemorrhoids treatment can be made. We hope that our study will contribute on the development of new drugs to be used in the treatment of hemorrhoids.

Author contributions: Concept – M.Ş.E., A.S.; Design – M.Ş.E., A.S.; Supervision – M.Ş.E., A.S.; Resource – M.Ş.E., A.S.; Materials – M.Ş.E., A.S.; Data Collection and/or Processing - M.Ş.E., A.S.; Analysis and/or Interpretation - M.Ş.E., A.S.; Literature Search – M.Ş.E., A.S.; Writing – M.Ş.E., A.S.; Critical Reviews – M.Ş.E., A.S.

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