



ETHNOBOTANICAL SURVEY OF TRADITIONAL MEDICINES FOR HEMORRHOID TREATMENT

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ABSTRACT: Hemorrhoids or piles is a type of gastrointestinal disorder in India where the required medication is often not available or too expensive for local people. Other possibilities have to be investigated, like traditional medication in the form of medicinal plants to control the symptoms of the disease. By visiting tribal zones of Bihar, a big table was made, containing approx 90 species which all have a potential effect against hemorrhoids. *Aegle marmelos*, *Aloe vera*, *Cassia fistula*, *Commiphora mukul*, *Dalbergia sissoo*, *Eclipta alba*, *Emblica officinalis*, *Ficus carica* Linn, *Ginkgo biloba*, *Linum usitatissimum* L., *Mangifera indica* Linn, *Momordica charantia*, *Nauclea latifolia*, *Ocimum canum*, *Solanum melongena* L., *Strychnos Nux-vomica* Linn., *Tinospora cordifolia*, *Syzygium aromaticum* and *Moringa oleifera* seem to be the most promising species for treatment. To solve the problem of unaffordable medication, a closer look should be taken to the common food crops, approx 107 plant species were applied to different patients among the tribals which have a possible effect against the hemorrhoid may be internal or externally prolapsed High fibre food may reduce constipation and enhance the bowel movements. Having different grades of piles either externally in the form of paste or internally as oral drug. The whole plant or its part either alone or in combination are used for treatment. All these plants which have property of curing piles are mentioned here along with the name of family, common vernacular name, botanical name, part used, different phytochemical(alkaloids, saponin, tannin, particular acids etc) and their images also. Medicinal plants are extremely valuable for health and material goods part of the biodiversity. The bioactive ingredients of these medicinally active plants are the main chemical constituents of the medicine prepared from these plants.

Keywords: alkaloid, tribal, medicinally active plants, medicines

INTRODUCTION

Hemorrhoids are masses of tissue in the anal canal that contain blood vessels. It is only when the hemorrhoidal cushion enlarge, that hemorrhoids can cause problems and then considered as disease. Hemorrhoids are also known as piles which are common ailment among adults. According to Dr. Mukul Patel hemorrhoids or piles, generally a very common disease and about 70% of the population suffered from piles or related symptom in their life time .Hemorrhoids are rare in children but now a days several reports state the occurrence of hemorrhoid in children (Heaton et. al.,1992)and in elder people (Navarra et. al., 2000) . Generally, the piles are inflammation of the blood vessel that generally nearby in anal canal. The piles are produce when the hemorrhoids are disrupted by the power of defecation .The hemorrhoid is varicosities of the veins of the hemorrhoidal plexus, often complicated by inflammation, thrombosis and bleeding (Berkow, 1992). According to Thomson, hemorrhoids is vascular cushions, consisting of thick submucosa containing both venous and arterial blood vessels (Thomson; 1975). Hippocrates describes this as flow of blood from the veins of the anus (Lef f E; 1987). Generally, hemorrhoid is also known as piles, which is actually a latin word, meaning a ball or a mass. In French, it is called figs which means clot (Rangnekar G.V. et. al, 1974).Generally piles are classified as – internal and external. Internal piles occur inside the rectum and when set of veins distended from anus results in external piles .In case of bleeding, these are termed as bleeding piles.



Survey and Study selection

Ethnobotanical survey was done in the tribal and rural area of different regions from 2010-2013. During survey, plant samples and photographs were collected from the study area. Ethnobotany is the broad area of research which provides different aspects of plant and its medicinal value thus only medicinal plants survey is termed Ethnomedicine. Data collected from different areas of Bihar and Jharkhand about the plants which cure the piles directly or indirectly is analyzed and arranged as table A.

The identification and devices to identify the indigenous knowledge of the listed plants were acquired via interviews and designed questionnaire from local Vaidya, Ayurvedacharya, Hakeem and older peoples as they have enough knowledge about the treatment of the piles/hemorrhoids and related medicinal properties of local plants. Their knowledge about common names of plants, plant part used for treatments, method of administration, their family& local names were recorded. By surveying different hospitals and medical practitioner, the medicinally active ingredients of these medicinal plants were recorded in data. Plants have several properties, which made them effective for the treatment of hemorrhoids, like anti-inflammatory and hepatoprotective. Tribals of Bihar/Jharkhand like Baiga, Asur, Banjara, Bedia ,Bathaudia, Binjhia, Bhumij, Birjia, Birhor, Chick, Baraik, Chero, Gorait, Gond, Karmali, Ho, Dom, Kharwar, Khond, Kisan, Kharia, Korba, Kora, Mahli, Lohar, Munda, Mal Paharia, Parhaiya, Oraon, Sauria ,Paharia, Santhal and Savar strongly belief on similar traditional herbal medicines but the vernacular name are different.

Aim of the research

The aim of this research is to analyse and review which plant species are being used in Bihar and Jharkhand for the treatment of hemorrhoids and which of those are promising species to effectively treat this disease. This is very important to determine, as Indian people who suffer from piles may benefit greatly from further testing of these species. Using effective medicinal plants can be an affordable way for them to treat the symptoms of Piles/Hemorrhoids and cope with the disease. This work will also enhance the economy of Indian pharmaceutical industry, agriculture professionals and also Indian treatment systems like ayurveda.

METHOD

The first step of this research was the visiting different tribal and rural areas for gathering authentic informations from people, comparing scientific articles in Google scholar about the phytochemical use in medicines for treatment of hemorrhoid, and make a clear summary of the results described in these papers. We searched different botanical names, family and images of plants from the flora. In order to do this we made an Excel table, containing the collected plant species, family, countries where the species was used in to treat piles, whether the species had cooling, alexiteric, and anthelmintic effect of the pile mass. According to the article, if the anti-hemorrhoid or other mentioned effects of the species were proven by means of an *in vivo* or *in vitro* test and the active principle in the plant which according to authors, was responsible for the anti-hemorrhoid effect. Therefore, we have noted whether any part of the plant (roots, stem, leaves, fruit, flowers) had wound healing, piles reducing, amount of blood increasing, blood purifying, constipation reducing etc capacity. This information was acquired from literature or by typing in the species in www.google.com and then comparing and verifying the google images from our photo collection of plants. Species names were updated by using The Plant List (www.theplantlist.org).



Survey of Ethnomedicine

The ethnomedicinal studies of hemorrhoids on plants species related to 33 tribes were collected .The data shows the collected information about the plant botanical as well as local names, particular parts used, methods of use, images and the alkaloids or the chemical constituents of the plants. These plants species were seen as effective used by local individuals to treat piles from Sushruta upto modern age.

RESULTS

Plant species used against hemorrhoids have selected from the traditional knowledge of the local peoples and tribals of the Bihar. About 80 articles were reviewed and screened for information about plants that were used traditionally against hemorrhoids. A total of 105 species was found, from different 60 families (see appendix). The best represented families, containing 3 species or more, were the Leguminosae (10), Asteraceae (6), Euphorbiaceae(5), Poaceae(3), Cucurbitaceae(3), Liliaceae(3), Convolvulaceae (3), Plantaginaceae (3), Arecaceae(3), Labiateae(3). This is not really a surprise as they all belong to the major group Angiosperms which has over 5.000 accepted species' names (www.theplantlist.org). From the 105 species, a total of 63 species had been proven to work against piles rapidly, which was 60% of the total. All study were done among the local people and the positive results were taken from them by observing reduction in pain, itching, swelling, bleeding and pile mass .

DISCUSSION

Ethnobotanical survey for pharmacological effects of different medicinal plants for the treatment of internal, external and bleeding piles indicate the power of nature. The traditional medicines are prepared from the herbal plants and their extracts (Lewington,A.,1993). Several modern therapy like sclerotherapy, cryotherapy, rubber band ligation, bipolar diathermy, direct current electrotherapy, infrared photocoagulation, surgical treatment etc and trational drugs (Shusrut Samhita, (1980) 4th edition & Charak Samhita,(1995)are used for the curing of hemorrhoids. The modern treatment of and surgery gives many other side – effects like burning sensation , pain, bleeding, itching etc but the herbal / natural therapy only takes slightly long time in comparition but do not shows any type of side effect. By the survey, many secrets were disclosed for the treatment ofhemorrhoids. Different pharmaceutical and drug preparing industries may take help from the tribals for many folk medicines. Actually, the manufacturing medicines are also based on the chemical present in the plants. Azaizeh,H. *et.al.*,(2003)reported, Approx 80% of people realise on the herbs for treatment of various diseases. According to Katewa *et.al.*,2004,the ethnobotany reveals many plants and their parts such as root,leaves,stem,flower,fruit,buds and even bark to prepare drugs for the curing of piles.The chemical constituents like saponin,tannin,sterol alkaloids etc of several local plants are actually anti-inflammatory, anti-oxidant,anti-hemorrhoidal,anti-cancerous,anti-ulceric etc.These alkaloids are the main constituents of any drugs for curing of piles/hemorrhoids. In this article , 107 pants were strictly surveyed among piles patients. All of these plants become a boon for them to curing piles. The active ingredients of these medicinally active plants shows the curing capacity of many severe diseases.The medicinal plants or different organ of plant without bad effect are used to cure diseases(Ruby *et al.*,2012).

CONCLUSION

The ethnomedicinal part from ethnobotany is the real basis for the preparation of several drugs for severe diseases. This survey indicates the power of herbs for the treatment of Grade I-IV hemorrhoids. The knowledge of Vaidya, Ayurvedacharya, older people, and tribals are the treasures by which pharmaceuticals and different drugs can be manufactured. The secondary metabolites produced by plants and their chemical constituents are the real factor for curing piles. One more important thing is that these



plants are not effective only in isolation but many of them are more effective in combination, not only for one disease but also for many (Sushruta Samhita;1980 & Charaka Samhita;1995). Pharmaceutical companies and drug industries may prepare medicines by these natural herbs. It was illustrated that the valuable plants that have a variety of uses by different folks in treating various diseases, like piles. The treatment of piles through medicinal plants has been more successful without any side- effect. Everyone can try the natural treatment and herbal medicines. Most of the times, it can become much less expansive then buying normal drugs.

Conservation and propagation of all medicinal plants are a very important task to be done for the preservation and conservation of our floral heritage and useful product from them.

ACKNOWLEDGEMENT:

I pay special thanks to the Department of Science and Technology for providing me financial support. I also pay thanks to the Head of Department of University Department of Botany, B.R.A.Bihar University, Muzaffarpur, Bihar, India. I pay thanks to the local people for their cooperation in field work.

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Table: A- Collection of medicinal plants used in the treatment of Hemorrhoids

Botanical Name	Family	Common Name	Parts Used	Alkaloids	Method of use	Images
<i>Abutilon indicum L.</i>	Malvaceae	Mallow	Leaves	Sesquiterpene lactones, β-sitosterol,	Leaves, flowers juice	
<i>Acalypha indica</i>	Euphorbiaceae	Kuppikholil	Leaves	Acalyphine, Triacetoneamine	fresh leaves juice	
<i>Achillea millefolia L</i>	Asteraceae	Yarrow	Whole plant	achilleine,trigonelline betonicine	Entire plant decoction	
<i>Achyranthes aspera Linn</i>	Amaranthaceae	Chirchira	stems,leaves,fruits, seeds	Triterpenoids, saponins,	Raw seeds, Juice	
<i>Aconitum heterophyllum</i>	Ranunculaceae	Athis	Seeds,Root	aconitine,hetisinone	Decoction seed	
<i>Aegle marmelos</i>	Rutaceae	Bel	Unripe fruit pulp	Marmelosin,terpenoidflavonoids,	unripe fruit juice	
<i>Aesculus hippocastanum l.</i>	Hippocastanaceae	Horse Chestnut	Seeds	Aescin,Bioflavonoids,Proanthocy anidin	seed extract	
<i>Albizia lebbek</i>	Mimosaceae	Siris	Bark, Seeds	Quercetin,kaempferol, AlbiziasaponinsA,B&C	Bark externally at wound	
<i>Alhagi maurorum</i>	Leguminosae	Camel Thorn	Flowers	2-phenyl- 1,4benzopyrone derivatives	along with sugar paste at piles.	
<i>Alocacia indica L.</i>	Arecaceae	Kansalu	Leaves, Root	glycosides, flavonoids, volatile oils	Leaves as vegetable	
<i>Aloe barbadensis L.</i>	Liliaceae	Ghee kunvar	Whole plant	tannins and saponins, proanthocy anidin,	complete plant	
<i>Aloe vera</i>	Liliaceae	Ghreet kumari	Dried juice of leaves	Anthraquin one glycoside,	Gel drink Half cup thrice	
<i>Azadirachta indica</i>	Meliaceae	Neem	Seeds eaves	, azadiradionolide Azadiranolide Meliatetraol	Grinded fresh leaves & 4-5 drops leaf oil	
<i>Barleria prionitis L</i>	Acanthaceae	Karunta	leaves	Balarenone,Pipataline, Shanzhiside,	decoction of leaves	
<i>Berberis aristata</i>	Berberidaceae	Daruharid ra	Root Bark	Berberine,Vit C, oxyberberine, berbamine, aromoline,	root bark decoction externally ulcers and hemorrhoid	
<i>Blumea lacera</i>	Asteracea	Jangli muli	Leaves, flowers	thymoquinodimethyl ether	Juice of leaves mixed with black pepper	
<i>Boswellia serrata</i>	Burseraceae	Shallaki	Bark, gummy resin	boswellic acid	Externally used (as an ointment) for wounds, ulcers, hemorrhoid	
<i>Bryoscarpus coccineus</i>	Connaraceae	Amuje wewe	Root, leaves, Bark	Dicoumarol, 4-hydroxycoumarin quercetin, quercetin	decoction of leaves drunk	



<i>Calatropis procera</i>	Asclepiadaceae	Aak	Whole plant	queretin-3- ratinoside, calotropin, calactin, calotoxin, calotropagenin,	laxative to treat the piles	
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<i>Cannabis sativa L.</i>	Cannabaceae	Bhang	Leaves	Cannabinol canabidiolic acid,	Decoction of leaves	
<i>Cardiospermum halicacabum</i>	Sapindaceae	Kanphata,	Leaves, root	Proanthocy anidin, apigenin, sti gmasterol,	Decoction of roots half (ts) twice a day	
<i>Cassia fistula</i>	Caesalpiniaceae	Amaltas	pod	Tannin	uncooked pulp of pods used for constipation	
<i>Centella asiatica</i>	Apiaceae	Jal Brahmi	Whole plant	Triterpen, saponin asiaticoside	applied locally three times daily to patients	
<i>Chenopodium album L</i>	Chenopodiacea e	Bathua	Leaves	phenolic amide, cinnamic acid, chinoalbicin	Leaves paste	
<i>Cissus quadrangularis</i>	Vitaceae	Hodjod	Stem	Betacaroten e, flavonoids, tannins	fleshy quadrangular stem	
<i>Citrullus colocynthis Schrad</i>	Cucurbitaceae	Indravarna	Root	Cucurbitaci n A /B/C/D/E	Shade dried root paste is applied	
<i>Collinsonia canadensis L.</i>	Lamiaceae	gur ghas	Root.	Bioflavonoi ds, Akeboside, 2- Germacrene elemicin, β - elemine	1-2(ts)herb per cup of water; 1:4 dry strength liquid extract: 4 times per day	
<i>Colocasia esculenta</i>	Araceae	Arvi,	Leaves and corms	Dihydroxyst erols 14 α -methyl-5 α -cholest-a-9	juice of the corm is laxative, demulcent, anodyne	
<i>Commiphora mukul</i>	Burseraceae	Guggul	Gum- resin	Diterpenoid s, volatile oil gum resin	Grind gum guggul with water and apply	

<i>Convolvulus arvensis</i>	Convolvulaceae	Hirankhuri	Roots and rhizome s	Polyhydroxy -nortropane , calystegins	Root tea ,Flowers & Leaves are laxative	
<i>Coriandrum sativum L.</i>	Apiaceae	Dhania	Leaves and seeds	carvone, , camphor, elemol and linalool	seeds and leaves decoction	
<i>Cupressus sempervirens</i>	Cupressaceae		Needles and twigs	sesquiterpe ne hydrocarbo ns	Oil extracted from the needles and twigs of young branches cure by external application	
<i>Cynodon dactylon P</i>	Poaceae	Doob,	Whole plant and rhizome	cynodin, hydrocyanic acid, triticin,	An infusion of the grass with milk	
<i>Dalbergia sissoo</i>	Fabaceae	Seesham	Leaves	dalbergene ne, dalbergin and methyl dalbergin,	Decoction of leaves used in bleeding piles.	

<i>Derris indica L.</i>	Fabaceae	Karanj	Whole plant	complete plant	treat bleeding piles,	
<i>Eclipta alba</i>	Asteraceae	Bhringraj	Whole plant	ecliptine.	ground leaves mixed with water, and drunk for constipation	
<i>Embelia ribes</i>	Myrsinaceae	Vavding	Fruit	alkaloids, christembine, vilangin	Fruit powder mixed Triphala powder is given with ghee.	



<i>Emblica officinalis</i>	Euphorbiaceae	Amla	Fruits	Vitamin C Tannin	3-5 gm fruit powder with cream of curd daily.	
<i>Euphorbia hirta L.</i>	Euphorbiaceae	Dudhiya	Whole plant	sterols, glycosides, saponins, triterpenoid	complete plant 20-25g leaves fried in ghee taken twice for 5 days	
<i>Evolvulus alsinoides Linn.</i>	Convolvulaceae	Sankhpus hpi	Whole plant	Pentatriaco ntan, tricontane and β-sitosterol.	Leaf juice	

<i>Ficus carica Linn</i>	Moraceae	Anjeera	Fruits, Latex	sterolsa, arabinose, β-amyrins, β- setosterols and xanthotoxol	Night soaked fruits taken in morning	
<i>Ficus religiosa</i>	Moraceae	Pippal	Fruits, bark, latex	flavonoids, β-sitosteryl-D-glucoside, vitamin K, n- octacosanol	Aqueous extract of the bark is used. 1-2 gm root powder with milk is taken orally.	
<i>Ginkgo biloba</i>	Ginkgoaceae.	Balkuwari	Leaves	Bioflavenoid Hesperi ginkgotoxin	leaves are used internally and externally.	
<i>Glycyrrhiza glabra L.</i>	Fabaceae	Jethimadh	Root	Triterpenes/ anthraquinones	Root powder extract is at night.	
<i>Hammamelis virginiana</i>	Hamamelidacea e	Witch hazel	Bark	Tannins and volatile oils	Apply the product prepared from bark powder to the affected area	
<i>Helicteres isora L.</i>	Sterculiaceae	Maror phali	Fruit	carbohydrates; anthraquinone glycosides, proteins,	Paste of fruit, wax and butter is applied.	

<i>Imperata cylindrica</i>	Poaceae	Kusa	Roots flowers	lidersiachro moneand 5- Imperata cylindrica 218 hydroxy-2- styrylchromone	root powder of orally 5g twice .	
<i>Linum usitatissimum L.</i>	Lamiaceae	Alsi	Fruit	omega-3 fat,dietary fibre, Saponin , Tannin,volatile essential oil	Fruit mixed with honey and ghee is given.	
<i>Madhuca longifolia</i>	Sapotaceae	Mahudo	Fruit	sapogenins, triterpenoids,steroids, saponins, flavonoids	Mixture of 6 gm fruit powder, 10 gm ghee and 15 gm honey twice a day	
<i>Mangifera indica Linn.</i>	Anacardiaceae	Aam	Seed	vitamins A, B, and C.	Powdered seed with or without honey. 20-40 ml juice of mango bark twice a day stop bleeding	
<i>Manikara zapota</i>	Sapotaceae	Chikoo	fruit , dietary fiber,	Tannins	Plant juice ash are used for treating bleeding	
<i>Matricaria Recutita L.</i>	Astaceae	Babuna	Dried flower	anthemidin e.	apply directly to the skin for hemorrhoids	
<i>Melastoma malabathri cum</i>	Melastomatace ae	Shapti	Root&Le aves	glycoside, flavonoid, terpenoid, saponin, phenol, steroid and tannins	Treat diarrhea& dysentery washfor ulcers,to treat Boil cut roots with a pot of water until 1/3 of a pot. 3 times a week.	
<i>Mentha piperita</i>	Labiatae	Pudina	Leaves	Pungent oil	Tincture applied externally to piles	



<i>Mimosa pudica L.</i>	Leguminosae	Chhuimui	Whole plant	mimosine,	Milk among leaf sap of plant used same as fine medication by piles.	
<i>Momordica charantia</i>	Cucurbitaceae	Jungli karella	Fruit, seeds	Saponin,tannin, terpenoids, phytosterol	Diabetes, sedative, bleeding piles and urinary complaints.	
<i>Mucuna sloanei</i>	Leguminosae	cowhage	Seeds, root	5-methoxytryptamine, serotonin	seed decoction soothing medicine to relieve discomfort	
<i>Murrya koenigii</i>	Rutaceae	Karipatta	Leaves	phosphorus, calcium, iron and vit C, fibers	fresh curry leave in food	
<i>Myrtus communis</i>	Myrtaceae	Vilayati Mehendi	leaves, seeds	Flavonoids, linoleic, myristic, palmitic, linolenic lauric acid	Decoction of leaves, seeds Berries Unani literature is 3to5grams.	

<i>Nauclea latifolia</i>	Rubiaceae	African Peach /Bishop's head	Inner bark, stem, sap, roots, fruits, root bark	tannins, saponins, alkaloids, sterols and glycosides	Decoction of bark & fruit	
<i>Nelumbo nucifera</i>	Nymphaeaceae	Kamal	flowers	roemerine, nuciferine, ananaine, pronuciferine,	Filament of flower decoction	
<i>Nyctanthes arbor-tristis</i>	Oleaceae	Prajakta	flowers	Phenolic compounds, tannins, flavonoids, cardiac glycosides, and alkaloids	crushed seeds aqueous paste applied externally	
<i>Ocimum Basilicum L.</i>	Labiateae	Niazboo	Leaves	linalool, methylcinamate, methyl chavicol, sambulene and safrole.	leaves&flowers decoction	
<i>Ocimum canum</i>	Labiateae	Kali-Tulsi	Leaf	flavonoids, essential oils, tannins, saponins, Phenolics	Leaf fresh juice	
<i>Opuntia dillenii Haw.</i>	Cactaceae	Nagphana	Whole plant	candidine hordenine,	Laxative pulp and juice	
<i>Pelargonium graveolens</i>	Geraniaceae	Geranium	Leaves and stem	citronellol + nerol and geraniol.[Geranium essential oil is obtained by steam distillation from flowers, leaves, and stalks.	
<i>Phoenix dactylifera L</i>	Arecaceae	Khajur	Fruit	Cardenolide s	Mixture of datefruits, grapes, ginger, sugar, ghee and milk	
<i>Phyla nodiflora</i>	Verbenaceae	Jalapli	Whole plants	Nodiflorins A,B, Lipiflorines A and B.	Chew2-3 leaves twice	
<i>Piper chaba</i>	Piperaceae	Kabab chini	Fruit	chabamide ,	Fruits juice	

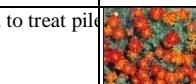
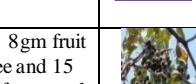
<i>Plantago major Linn.</i>	Plantaginaceae	Lahuriya	Leaves, roots, seeds	glucoside, aucubin, and enzymes invertin emulsin.	Decoction of leaves	
<i>Plantago ovata</i>	Plantaginaceae	Ispaghula	Seeds , leaves	Mucilage, glucoside, aucubin	Decoction of mucilaginous leaves& roots used	
<i>Plantago psyllium</i>	Plantaginaceae	Isabgol	husks, leaves,s eeds	glycosides, mucilage, silica and tannins.	Husk drink in morning	



<i>Plumbago zeylanica Li nn.</i>	Plumbaginaceae	Chitrak.	Root	plumbagin.	Root curd paste prepared with	
<i>Pongamia pinnata</i>	Fabaceae	Karanj	Leaves , Seeds, roots and bark	demethoxy- kanugin, gamatay, glabrin, neoglabrin, tannin.	leaves laxative, anthelmintic	
<i>Psidium guajava L.</i>	Myrtaceae	Amrood	Fruit, leaves	flavonoids, glycosides, saponins anthocyanins, carotenoids, essential oil tannins, lectins, phenols, saponins, tannins	fruit consume daily unfilled abdomen to treat ailment piles	
<i>Quamoclit pennata De sr.</i>	Convolvulaceae	Kamlata.	leaves	hydrocyanic acid , lysergic acid, furanoterpenes, indolizidine	pounded leaves applied	
<i>Raphanus sativus L.</i>	Brassicaceae	Muli	Root	sinalbin, sinigrin; glucobrassicin	Root paste is applied.	
<i>Rheum australe D.</i>	Polygonaceae	chotial	Tuber and Leaves	anthraquinones, stilbenes, anthrones, oxanthrone ethers	Tuber & leave eaten	
<i>Ricinus communis Linn.</i>	Euphorbiaceae	Arandi	Seed oil	ricin; ricinin; ricinus lipase.	seeds are roasted, pounded, and applied to affected area	
<i>Rosa canina</i>	Rosaceae	gulab	Fruits	Vitamin C	Powdered fruits cream over wound	
<i>Rubia cordifolia</i>	Rubiaceae	Majith	roots	Alizarin anthraquinone Glycosides saponins, resin	Decoction of root and stem powder over piles	
<i>Rumex dentatus L.</i>	Polygonaceae	Shalkhay	Leaves	terpenoids, alkaloids, saponins, tannins	leaves used to treat piles	
<i>Saraca indica</i>	Leguminosae	Ulta ashoak	Leaves	gentianine, gentiocrucin e, enicoflaving	bark decoction	
<i>Senna fistula</i>	Leguminosae	Golden Showers	Pods, leaves	flavonoids, tannins, phlobatannins,	Pods & leaves made decoction	
<i>Sesamum orientale</i>	Pedaliaceae	Til	seeds	Pedaliin	powered seeds well mixed with water&ghee	
<i>Sida cordifolia</i>	Malvaceae	bala	Leaves, root, seeds	β- phenethylamine, ephedrine, pseudoephedrine-hypaphorin	Leaves are cooked and eaten in cases of bleeding piles.	

<i>Silybum marianum</i>	Asteraceae	Bhat-kataiya	Fruits, Seeds	Flavonolignans silychristine, silybin	Decoction of seeds and fruit .	
<i>Solanum melongena L.</i>	Solanaceae	bagun	Leaves peduncle	flavonoids, alkaloids, tannins and steroids.	Whole plant juice	
<i>Solanum nigrum L.</i>	Solanaceae	Kainch	Fruit	steroidal saponins glycoprotein Solamargin,Solasonin	Fruit & leaf juice	
<i>Solidago virgaurea</i>	Compositae	Pinja phul	Entire plant.	quercitrin and rutin	Decoction of leaves , flowers used as tea	
<i>Stereospermum suaveolens</i>	Bignoniaceae	"Patla",	Root ,bark	naphthoquinone lapachol	Traditionally root is used	



<i>Strychnos Nux-vomica Linn.</i>	Loganiaceae	Kuchla	Seeds, bark, roots, leaves	strychnine and brucine	Powdered seeds,	
<i>Tagetes patula L</i>	Asteraceae	utta	Flower	Quercetagine, volatile oil, phytomelan	The flowers is used to treat piles	
<i>Tamarindus indica Linn</i>	Fabaceae	Imlii,	Flowers	citric, acetic, butyric and oxalic acids; tannin; pectin	decocotion or infusion, glasses of tea, Juice expressed from flowers	
<i>Terminalia bellirica (Gaertn.) Roxb.</i>	Combretaceae	Baheda	Fruit	R-sitosterol, gallic acid, ethylegallate, thebelleric acid, chebulagic acid	6 gm fruit powder, 8gm fruit powder, 10 gm ghee and 15 gm honey twice day for a week	

<i>Terminalia chebula</i>	Combretaceae	Harre	Fruits, Roots, Bark	Tannin, Quinones, anthraquinone,	Decoction of fruit	
<i>Tinospora cordifolia</i>	Menispermaceae	Galo	Stem	saponins, cardiac glycosides, steroids,	Paste of stem,leaf powder, ginger, rock salt mixed with buttermilk is applied.	
<i>Trianthema portulacastrum Linn.</i>	Aizoaceae	Gadhpurna	Whole plant and roots	Trianthemin e, 3,4-dimethoxy cinnamic acid betacuanin, trianthenol	root is applied, plant is alexiteric, analgesic, stomachic, laxative	
<i>Trichosanthes dioica</i>	Cucurbitaceae	Parval	Leaves	vitaminA,C, saponins, terpenes	Decoction of plant leaves coriander leaves twice a day for a week.	
<i>Ulmus fulva</i>	Ulmaceae	Indian Elm	inner bark	tannins mucilage	mucilage and woody fiber infusion	

<i>Vateria indica</i>	Dipterocarpaceae	Badasal	tree's bark	Bitter resin	Powered bark externally used over the piles	
<i>Vitex negundo</i>	Verbenaceae	Nirgundi	Whole plant	Tannin	Powdered flowers and stalks	
<i>Zea</i>	Poaceae	Makka	Fruits (grains)	Sorbitol, ratinose, vitamin E, C, β -carotene	decoction of grain	
<i>Zingiber officinale Rosc</i>	Zingiberaceae	Adrak	Rhizome	camphene, phellandrene, zingiberene	Underground stem stimulant, stomachic, expectorant and rubefacient.	

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