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## A survey of medicinal plants used by abagusii traditional healers of South Western Kenya in the treatment of haemorrhoids

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### Abstract

The bulk of the world's health care is still based on the traditional use of local herbal remedies. Ethnomedicinal survey of plants used by Abagusii traditional healers of South West Kenya in the treatment of haemorrhoids was carried out and 10 plant species were botanically identified. It was found that in this ethnic group, there were a great variety of models that herbalists were using was based upon a five stage process, herbal actions, system affinity, specific remedies for the illness, herbal biochemistry and intuition. This study also revealed that the Abagusii healers have an extensive knowledge of their flora. This study also revealed that there was a rapid disappearance of many indigenous herbal medicinal plants, hence the need for conservation measures to be taken.

**Keywords:** Haemorrhoids, tonic, chamomile, Gusii, Kenya

### 1. Introduction

Historically, haemorrhoid was first mentioned in the Bible. During this period, people explained life challenges from metaphysical and supernatural paradigms. The strange illness elicited social definitions and reactions. But as positive society emerges; beliefs and social reactions toward illness are modified.

People seek logical explanation of life issues. Scholars have defined empirically that haemorrhoid is a varicose and often inflamed or swollen condition of the veins, inside or just outside the rectum caused by increased pressure in the rectal veins [12]. While, [3, 17] haemorrhoid is most opined as common anorectal disease; it causes distress and its treatments are often unsatisfactory due to recurrence or complications.

Herbal medicine is uniquely suited for the treatment of human gastro- intestinal disorders. Throughout human evolution, our food has been our medicine, ensuring that the healing properties of the herbs we consume have a direct effect on the lining of the alimentary canal. Herbs affect digestive system function, not only through absorption and metabolism of whole range of plant materials, but also through direct actions upon the tissue of the gut [2].

Much of the gastric system illness in our society is due to abuse of drugs. Today's average diet contains preponderance of overly processed foods with a high content of chemical additives [24]. The gastro-intestinal tract is subject to direct chemical irritation from alcohol, carbonated drinks and tobacco. In this context, it is easy to see why herbal remedies can be so helpful in treating various inflammations and reactions that plague abusers. The direct soothing action of demulcents healing properties of astringents and the general toning of bitters have much to offer in reversing such damages [13].

However, as with all true healing, any potential "cure" lies beyond the range of medicines, whether herbal or synthetic. The healing process must incorporate lifestyle changes to eliminate dietary indiscretions and chemical abuses as well as reduce stress. Herbal medicine can bring about dramatic improvements in profound digestive system problems but the potential to maintain these benefits long term lies in the hands of the person seeking treatment [14].

Used within such a broad context, herbal medicine offers specific remedies for particular pathological syndromes as well as tonics and normalizers that can help prevent problems from manifesting in the body. It is possible to treat such problems within a context of general nurturing that speeds improvement and helps re-establish health and harmony [20]. In the hands of a skilled herbalist, much can be achieved therapeutically. While the array of factors will be different for each individual, for example a gastric ulcer, it is possible to identify

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some general herbal guidelines. Ideally, it is to preserve health and maintain wellness rather than merely treat illness and thus acts as a preventative medicine than consuming medicinal substances, whether medicinal plants or chemical drugs. This can be put in perspective by recalling the World Health Organisation (WHO) definition of health; Health is a state of complete, physical, emotional, mental and social well-being and not merely the absence of disease or infirmity [30]. This should also serve to remind us that any attempt to promote wellness and prevent the development of disease, we must address the whole complex of factors that WHO identified [26].

## 2. Materials and methods

### 2.1 Research design

An ethno medica survey was conducted in Gusii (Nyamira and Kisii) Counties in South Western Kenya in order to obtain ethno-botanical information from traditional healers.

### 2.2 Description of the study area

The study was conducted in Kisii and Nyamira (Gusii) Counties of Kenya. Kisii and Nyamira Counties lie between latitude 0° 35' and 1° 88' South and longitude 34° 03' and 35° 05' east. Kisii and Nyamira Counties covers total area of 2214.3 km<sup>2</sup> and a population of 1,879,839 inhabitants, based on population census of 2019. Over 67% of this population is living below the poverty line [32]. There are fourteen administrative sub-counties within the two counties namely: Manga, Masaba North, Borabu, Nyamira North, Nyamira South, Gucha, Gucha South, Kisii South, Kisii Central, Marani, Masaba South, Nyamache, Sameta and Kenyenyia. More than 70 percent of the population is involved in agriculture related activities as a means of livelihood thus the need for more investment in agriculture. Main economic activities of the area include: maize farming, tea production, brick making and dairy farming.



Adopted from Google Maps on 17/5/2020

**Fig 1:** Kisii and Nyamira Counties, Nyanza Province of Kenya, where the research was undertaken.

### 2.3 Data collection

A number of villages in the study area were visited. The information on the ethno medical practices gathered from the traditional healers was entered into questionnaires and field notebooks. The healers were quizzed about their knowledge, methods of diagnosis, preparation of herbal

potions and the treatment of the disease. The specific plant part (s) used along with the methods of preparation were recorded. This work was done between the months of January and February 2020; a period of heavy rains when there was plenty of vegetation.

The plant specimens were collected and pressed in a plant press and placed in the herbarium to dry under room temperature. Their vernacular names were recorded while in the field. The plants collected were then identified using the Kenyatta University Botany Department's Herbarium and the East African Herbarium. For each plant specimen collected, the vernacular name, botanical name and ethno medical uses(s), method of preparation of the medicinal potion and toxic effect, if any, were documented. Voucher specimens were deposited in the Faculty of Agriculture, Kisii University College.

## 3. Results

Ten plant species commonly used by the Abagusii traditional medical practitioners in treatment of haemorrhoids were botanically identified. Actions, preparations, dosage and safety considerations were determined and the results are presented as follows;

### 3.1 Treatment of haemorrhoids

It is a combination of both gastric and cardio-vascular system, thus the treatment should include both blood vessel tonics and lower bowel support.

#### Actions indicated

Vascular tonics; will help the muscular tone and the general state of well-being of the veins involved.

Astringents; Will reduce bleeding if present and tighten the tissue locally. However, if they are used internally, take precautions to avoid constipation.

Bitters; Assist the digestive system and eliminate processes and facilitate bowel movements.

Aperients and laxatives; Ensures easier bowel movements.

Verlneraries; Speeds local healing of inflamed tissues

Emollients; Soothes irritated tissues if applied externally

Anti-inflammatories; Soothe inflamed tissues

Key; FN- Family Name, BN-Botanical Name; Common Name, VN-Vernacular Name; PU-Parts Used and C-constituents.

**1. FM-** Family name: Asteraceae

**BN-** *Achillea millefolium*

**CN-** Yellow

**VN-** Eyaro

**PU-** Aerial parts

**C-** 0.3%-1.4% Volatile oil, sesquiterpene lactones

3%-4% tannins-flavonoids, alkaloids, phenolic acids; Coumarins [31].

**Actions;** Diaphoretic, hypotensive, astringent, anti-inflammatory, anti-spasmodic, diuretic, anti-microbial, bitter and hepatic

#### Indications

*Achillea* is an important diaphoretic herb and it's a standard remedy for helping the body deal with fever. It stimulates digestion and tones blood vessels. As a urinary tract antiseptic, it is indicated in infections such as cystitis, for

which it is the most effective if used fresh. *Achillea* is considered a specific in thrombotic conditions associated with hypertension, lowers blood pressure through dilation of peripheral vessels. Researchers believe that its anti-inflammatory and anti-spasmodic actions are related to its content of flavonoids [8]. Used externally, *Achillea* aids in wound healing. Anti-microbial activity against a wide range of bacteria has been reported for water and ether extracts of the plant [6].

### Safety considerations

Hypersensitivity to *Achillea* (yellow) and other plants in the Asteraceae family has been reported. Some authorities caution against using *Achillea* during pregnancy [23]. No restrictions during lactation have been suggested.

### Preparations and dosage

Tincture dosage is 2-4mls (1:5 in 25%) three times a day to make an infusion, pour one cup of boiling water over 1-2 spoons of dried herb and infuse for 10-15 minutes, this should be drunk hot three times a day. When the patient is feverish, it should be drunk hourly.

**2. FN-** Plantaginaceae

**BN-** *Plantago major* L.

**CN-** Plantain.

**VN-** Eplantaini

**PU-** Leaf aerial parts

**C-** Iridois, tannins, plant acids [31].

**Actions-** Vulnerary expectorant demulcent and anti-inflammatory astringent, diuretic anti-microbial.

**Indications** Both greater plantain (*Plantago*) and its close relative ribwort plantain (*P. lanceolata*) have valuable healing powers. Plantain acts as a gentle expectorant while soothing inflamed and sore membranes making it ideal for coughs and mild bronchitis. Its astringency is helpful in diarrhoea hemorrhoides and cystitis accompanied by bleeding. It may be applied typically for hemorrhoides and skin ulcerations.

### Safety considerations

No side effects or drug interactions have been reported

### Preparations and dosage

Tincture dosage is 2-3 ml, three times a day (1:5 in 40% alcohol). To make any infusion, pour one cup of boiling water over 2 spoons of dried herb and infuse for 10 minutes, this should be drunk three times a day. An ointment may be made for treatment of haemorrhoids and cuts.

**3. FN-** Asteraceae

**BN-** *Matricaria recutita* L.

**CN-** German Chamomile

**VN-** Echamomairi

**PU-** Flower head

**C-** Sesquiterpenes; Sesquiterpenes lactones, Flavanoid glycosides [10].

### Actions

Nervine antispasmodic, carminative, anti-inflammatory, anti-microbial, bitter, vulnerary

### Indications

A comprehensive list of medicinal uses for chamomile could be very long, included could be insomnia, anxiety, menopausal depression, loss of appetite, dyspepsia, gastric ulcers, diarrhoea, colic, aches and pains of flu, migraine, neuralgia, teething, vertigo, motion, sickness, conjunctivitis, inflamed skin, urticarial etc. Chamomile is most widely used as a relaxing nervine since it is safe for use in all types of anxiety and stress related disorders. It relaxes and tones the nervous system and it is especially valuable when anxiety and tension produce digestive symptoms such as gas, colic pains and even ulcers. This ability to ease physical symptoms as well as underlying psychological tension is one of the greatest benefits of herbal remedies in stress and anxiety. Chamomile makes a wonderful late night tea to ensure restful sleep. It is also helpful for anxious children or teething infants when added to bath water. As an antispasmodic herb, chamomile works on peripheral nerves and muscles thus indirectly relaxes the whole body. When the physical body is at ease, the mind and heart follow. The herb prevents and eases muscle cramps whether in the legs or in the abdomen when added to bath water.

Chamomile infusion or essential oil relaxes the body and eases body weight, troubled mind and heart. Since it is rich in essential oil, it acts on the digestive system thus promoting proper function. This usually involves soothing the walls of the intestines easing gripping pains and facilitating the elimination of gas. A cup of hot chamomile tea is a simple effective way to relieve indigestion. It also calms inflammations such as gastritis and helps prevent ulcers. If it is used internally, it is an effective anti-inflammatory remedy for the digestive and respiratory system. It has a similar action on the skin when applied externally. A steam inhalation of chamomile essential oil puts its valuable constituents in contact with inflamed mucous membranes in the tissues and lungs. Chamomile is also a mild anti-microbial that helps the body destroy or resist pathogens. As anticarrhal, it assists in the elimination of excess build up in the sinus area. It may also be used to treat head colds and allergies such as hay fever.

### Safety precautions

Chamomile may cause allergic reactions in people sensitive to plants in the Asteraceae family. However, such reactions are extremely rare.

### Preparations and dosage

Chamomile may be used in any of the ways prepared as medicine. It may be used when fresh or dried in infusions and tincture is an excellent dosage form to ensure that all constituents are extracted and available. Chamomile essential oil is valued in aromatherapy. For an infusion, infuse 2-3 teaspoons of herb in one cup of boiling water for ten minutes in a covered container, this should be drunk 3-4 times a day. Tincture dosage is 1-4 ml, three times a day (1:5 in 44%)

**4. FN-** Clusiaceae

**BN-** *Hypericum perforatum* L.

**CN-** St John's Wort

**VN-** Ewati

**PU-** Aerial parts

**C-** Volatile oils, naphrodianthones, catechins, proanthocyanidins, flavonoids (Blumenthal, 2003)



**Actions**

Anti-inflammatory, astringents, vulnerary nervine, anti-microbial

**Indications**

Taken internally St John's Wort has sedative and pain relieving effects giving it a place in the treatment of neuralgia, anxiety, tension and similar problems. It is considered especially appropriate for the use when menopausal changes trigger irritability and anxiety. St John's Wort is increasingly recommended to treat depression, an indication that it is supported by numerous clinical trials in both Europe and the United States [15].

The mechanism of action for the purported antidepressant activity of *Hypericum perforatum* is not understood. One study tested the herb in several biochemical models relevant to the mechanism of action of anti-depressant drugs- for example monoamine oxidase (MAO) inhibition. It was found to have a weak MOA-A and MOA-B inhibition activity *in vitro* but the study authors concluded that MAO inhibition doesn't explain the herb's anti-depressant activity [22].

**Safety considerations**

No adverse reactions have been confirmed at dose levels upto 1mg of total [27]. Photosensitisation at high doses have been reported during experimental antiviral treatment with synthetic hypericin (35mg intravenously) in HIV positive patients [16]. While a few instances of photosensitisation have been documented, this appears to be very rare. A recent study utilising human keratinocyte cell cultures demonstrated that usual therapeutic doses of hypericum extracts are about 30-50 times below the phototoxic levels [27]. There have been reports of elevated serotonin levels in patients taking selective serotonin reuptake inhibitors (such as sertraline) in combination with St John's Wort [26]. Evidence suggests that St John's Wort affects the hepatic cytochrome P<sub>450</sub> system, which increases the activity of its most abundant isozyme, CYP<sub>3A4</sub> thus theoretically, the herb could reduce the activity of simultaneously administered drugs that are known substrates for this isozyme, including non-sedating antihistamines oral contraceptives, certain anti-retroviral agents, anti-epileptic medications, calcium channel blockers, cyclosporine, some chemotherapeutic drugs, macrolide antibiotics and selected antifungals.

**Preparations and dosage**

Tincture dosage is 2-ml, three times a day (1:5 in 40%). To make an infusion, pour 1 cup of boiling water over 1-2 teaspoons of dried herb and infuse for 10-15 minutes, this should be drunk three times a day.

**5. FN- Asteraceae**

**BN-** *Calendula officinalis* L.

**CN-** Marigola; Pot Marigold.

**VN-** Ekarendura

**PU-** Petals, flower head

**C-** Triterpenes; Volatile oil, Volatile oil, Chlorogenic acid [31]

**Actions**

Anti-inflammatory, anti-spasmodic, lymphatic, astringent, vulnerary emmenagogue, Cholagogue, anti-fungal.

**Indications**

*Calendula* may be used safely whenever there is inflammation on the skin, whether due to infection of physical damage. It may be applied for any external bleeding or wound bruising or strains. The herb is also of benefit for slow healing wounds and skin ulcers and ideal for first aid treatment of minor treatment and scales. *Calendula* may be applied locally as a lotion, poultice or compress depending on which is most appropriate. *Calendula* has long been used throughout Gusiiland for wound healing and treatment of both skin and gastric ulcers, its healing powers appear to be based at least in part of its terpene content.

When taken internally, *Calendula* has anti-inflammatory actions on the digestive system and thus may be used in the treatment of gastric and duodenal ulcers. As a cholagogue, it helps in relieving the gall bladder problems and many of the vague digestive complaints known as 'indigestion'. *Calendula* demonstrates marked anti-fungal activity and may be used both internally and externally to combat fungal infections. As an emmenagogue, it has a reputation for helping with delayed menstruation and easing painful periods. In general, it is considered as a normalizer of the menstrual process. In the laboratory, *C. officinalis* L. has demonstrated anti-inflammatory, anti-bacterial and anti-viral activities [9]. A combination of allantoin and *C. officinalis* extract applied to surgically induced skin wounds in rats was reported to stimulate physiological regeneration and granulation. Allantoin alone exerted a much weaker action [18].

**Safety considerations**

*C. officinalis* is a possible allergen for those with known sensitivity to members of Asteraceae family. It was shown to be non-toxic when administered chronically to mice in the form of aqueous extract [12]. No symptoms of toxicity were observed after administration of *C. officinalis* flower extracts at a dosage of 0.15g/kg to hamsters older than 18 months and rats older than 21 months [4].

**Preparations and dosage**

Tincture dosage is 1-4 ml, three times a day (1:5 ml 60%). To make an infusion, 1 cup of boiling water is poured over 1-2 spoons of flowers and infused for 10-15 minutes. This should be drunk three times a day. *C. officinalis* may be applied externally as a lotion or ointments for cuts, bruises, diaper rash, sore nipples, burns and scalds.

**6. FN- Hippocastanaceae**

**BN-** *Aesculus hippocastanum* L.

**CN-** Horse chestnut

**VN-** Eosichesinati

**PU-** Seeds, pericarp

**C-** Triterpene, saponin glycosides, flavonoids, coumarin derivatives, condensed tannins, sterols, fatty acids [10]

**Actions**

Astringent anti-inflammatory; venous tonic

**Indications**

*Aesculus* has unique actions on the vessels of the circulatory system. The herb appears to increase the elasticity and tone of the veins while decreasing vein permeability. It may be used internally for the treatment of phlebitis vein

inflammation varicosities and haemorrhoids. Externally, it may be used as a lotion for the same conditions as well as for leg ulcers. *Aescin* has an anti-exudative actions and a tightening effect on the vasculature. *Aesculus* extract may reduce the activity of lysosomal enzymes which is increased in chronic pathological conditions of the veins and inhibits the breakdown of mucopolysaccharides in the capillary walls.

A reduction in the activity of these enzymes has the effect of decreasing vascular permeability leading to improvement in symptoms of chronic venous insufficiency, including sensation of tiredness, heaviness, pruritis, pain and swelling in the legs <sup>[10]</sup>. A study of 22 patients with venous insufficiency showed that 1200 mg of *Aesculus* extract (standardised to 50 mg aescin per capsule) lowered capillary filtration by 22% in 3 hours <sup>[11]</sup>. A review of 13 clinical studies reported that *Aesculum* was superior to Placebo in improving symptoms of chronic venous insufficiency. The pooled results showed that *Aesculus* reduced oedema, pain, fatigue, tenseness and in some cases pruritis in the legs <sup>[25]</sup>.

#### Safety considerations

The seed contains coumarin derivatives that may theoretically interact with coagulant medications.

#### Preparations and dosage

Tincture dosage 1-4 ml, three times a day (1:5 in 40%). To make an infusion, 1 cup of boiling water is poured over 1-2 spoons of dried fruit and left to infuse for 10-15 minutes, this should be drunk three times a day or used as a lotion.

#### 7. FN- Geraniaceae

**BN-** *Geranium maculatum* L.

**VN-** Ekirenbiri

**CN-** Cranebill

**PU-** Rhizome

**C-** Tannins including gallic acid (levels are highest just before flowering <sup>[31]</sup>)

#### Actions

Astringent, anti-hemorrhagic, anti-inflammatory, vulnerary

#### Indications

*G. maculatum* is an effective astringent used for treatment of haemorrhoids, diarrhoea and dysentery. When duodenal or gastric ulceration is associated with bleeding, this remedy may be used with combination with other relevant herbs. *G. maculatum* will help when blood is lost in faeces although careful diagnosis is vital. It is also indicated for the treatment for menorrhagia (excessive blood loss during menstruation) or metrorrhagia (uterine haemorrhage). As a douche it may be used to treat leukorrhoea.

#### Safety considerations

No side effects or drug interactions have been reported.

#### Preparations and dosage

Tincture dosage is 2-4 ml three times a day (1:5 in 40%). For a decoction, 1-2 tea scoopfuls of rhizome are put in a cup of cold water and this is brought to boil and allowed to simmer for 10-15 minutes, this should be drunk three times a day.

#### 8. FN- Ginkgoaceae

**BN-** *Ginkgo biloba* L.

**CN-** Ginkgo

**VN-** Eginkigo

**PU-** Leaf, seed kernel

**C-** Diterpene lactones, sesquiterpene lactone, flavonol glycosides <sup>[10]</sup>

#### Actions

Anti-inflammatory, vasodilator, relaxant, digestive bitter, uterine stimulant

#### Indications

Treatment of peripheral vascular disease and cerebral insufficiency <sup>[19]</sup>. Ginkgo's primary actions are to increase blood supply, antagonise platelet activating factor, protect and enhance brain function (an action known as cerebro-protection). Its ability to improve circulation and thus blood supply appears to be due to both its vasodilation properties and its ability to reduce total blood viscosity. Various mechanisms may underlie the vasodilation activity for example effects on prostaglandin metabolism that increase the synthesis of re vasodilator prostacyclin.

Ginkgo's anti-oxidant radical scavenging properties may also play a role. Its ability to lower pathological elevated total blood viscosity seems to be due to its antagonism which results in a reduction in erythrocyte aggregation. The Ginkgolides and bilobalides appear to be responsible for the herb's cerebro-protective properties <sup>[20]</sup>. Among other factors, researchers have studied Ginkgo's ability to increase tolerance to hypoxia, protect against ischemia, improve energy metabolism and reduce oedema in order to demonstrate the protective actions of Ginkgo extracts on experimentally damaged brain.

#### Safety considerations

Ginkgo may have additive effects when used with other anti-platelet agents. Ginkgo has demonstrated a very incidence of side effects and a relative lack of reported drug interactions, evidence by the fact that many elderly patients taking Ginkgo take multiple other medications simultaneously. Ginkgo may potentiate the effects of papaverine used to treat male impotence <sup>[28]</sup>.

#### Preparations and dosage

Dosage of standardised extract is 120-240 mg/day, in divided doses. For optimal results, 4-8 weeks of daily use are recommended.

#### 9. FN: Ranunculaceae

**BN:** *Hydrastis canadensis* L.

**CN:** Golden seal

**VN-** Egorotenisiri

**PU:** Root, rhizome

**C:** Isoquinoline alkaloids, fatty acids, resin, phenylpropanoids, small amounts of volatile oil <sup>[10]</sup>.

**Actions:** Bitter, hepatic alternative, ant catarrhal, anti-microbial, anti-inflammatory laxative, emmeriagogue oxytocic.

**Indications:** *C. Canadensis* is one of the most useful remedies in Gusii traditional medicine and it owes much of its tonic effects on mucous membranes. This probably accounts for its effectiveness in digestive problems from

peptic ulcers to colitis. The alkaloid it contains stimulates bile production and secretion and this bitter stimulant activity makes it useful for loss of appetite.

*C. Canadensis* is effective in catarrhal conditions, especially sinks disorders. The herbs pharmacological activity including its antimicrobial properties is usually attributed to the isoquinoline alkaloid constituents; primarily hydrastine and berberine. Berberine has immune-stimulant antispasmodic, sedative hypotensive uterotonic cholereactive and carminative actions. It also has marked antimicrobial activity and while not in the same league as pharmaceutical antibiotics, it has a broad, spectrum of antibiotic activity. Its activity has been demonstrated against a number of bacteria, protozoans and fungi in vitro [23].

Traditionally, *H. Canadensis* was used during labour to help contractions, but for this very reason it should not be taken during pregnancy. Applied externally it can help with eczema, ringworm, itching, earache and conjunctivitis.

#### Safety considerations

Contraindicated for individuals with elevated blood pressure.

Prolonged use may decrease vitamin B absorption. Not to be used during pregnancy and lactation.

#### Preparation and dosage

Tincture dosage is 1ml three times a day (1:5 m in 60:10). To make an infusion 1cm<sup>3</sup> of boiling water is poured. ½ teaspoonful of powdered root and infused for 10 to 15 minutes. This should be drunk three times a day. Decoct unpowdered root in the usual way, by simmering.

**10. FN:** Asteraceae

**BN:** *Taxacum officinale* Weber ex Wigg

**VN:** Etanderioni

**PU:** Root, leaf

**C:** Sesquiterpene lactones diterpenes, sterols, carotenoids, flavonoids, polysaccharides [6]

**Actions:** Diuretic hepatic, cholagogue, antirheumatic, laxative, tonic, bitter.

**Indications:** *Taraxacum officinale* leaf is a powerful diuretic with an action comparable to that of the drug furosemide. The usual effect of a drug that stimulates kidney function in loss of vital potassium from the body which can aggregate any cardiovascular problem that may be present. *I. officinalis*, however, is not only an effect diuretic but also one of the best natural sources of potassium. It is thus an ideal balanced remedy that may be safely whenever diuretic action is needed, even for water retention related to heart problems.

Generally, this herb is most a valuable general tonic and perhaps the best widely applied diuretic and liver tonic. In one study investigating the effects of oral administration of *T. officinale* extracts in rats and mice, leaf extracts produced greater diuresis than root extracts and a dose of 50ml/kg body weight (equivalent to 2g dried herb) produced an effect comparable to that of furosemide given at a dosage of 80 mg/kg [10]. As hepatic and cholagogue, *C. officinalis* root may be helpful for inflammation and congestion of the liver and the gall bladder. It is specific for cases of congestive jaundice [21]. In addition, it can be very effective as part of a wider treatment for muscular rheumatism.

#### Safety considerations

*C. officinalis* may theoretically cause allergic reactions in people sensitive to plants of Asteraceae family. There have been rare reports of contact dermatitis to people coming into frequent contact with the latex found in the stem [6].

#### Preparations and dosage

Root tincture dosage is 2.5 to 5 ml three times a day, (1:5 in 60%). To make a root decoction, put 2-3 spoonfulls of root into 1 cup of water bringing to boil and gently simmer for 10-15 minutes, this should be drunk three times a day. Leaf tincture dosage is 5-10 ml three times a day (1:5 in 40%). To make a leaf infusion, pour one cup of boiling water over 1-2 spoonful of dried leaf and infuse for 10-15 minutes and this should be drunk three time a day. The leaf may also be eaten raw in salads.

#### 4. Discussion

The herbalist who is versed in the science and practice of modern herbal medicine must have some modern protocols to follow in formulating a prescription that addresses the needs of the whole person. The herbal component of the treatment must be used in a context that also takes into account non-herbal factors such diet, lifestyle, emotional, mental and spiritual issues. In addition, all of these must take place with the framework of a particular socio-economic situation and philosophical context. Such a model enables a practitioner to identify and address a whole range of factors from symptoms and pathology to constitutional differences and whole body toning. These findings are in line with those obtained by [21] that treatment lines for hemorrhoids are discussed as conservative approaches such as dietary fiber and oral fluids, rest and nonsteroidal anti-inflammatory drugs as well as surgical techniques associated with degrees of complication.

To choose specific body remedies that an individual needs from the vast range of possibilities nature offers can be a daunting task. However, it can be simplified if one uses a set of guidelines. These set of guidelines are based on the assumption that the prescriber has a basic grasp of human physiology and pathology. These findings are in tandem with those of [5] who observed that the knowledge of drug has accumulated over thousands of years as a result of man's inquisitive nature so that today we possess many effective means of ensuring health care.

In the survey, it was found that the model that herbalists were using was based upon a five stage process, herbal actions, system affinity, specific remedies for the illness, herbal biochemistry and intuition.

#### 4.1 Herbal actions

Herbal actions reflect the ways in which remedies affect human physiology. Plants have a direct impact on physiological activity and knowing what body processes are involved in both disease and wellness facilitates selection of an appropriate action. Obviously selection of actions suitable for a specific person will also depend on curable diagnosis.

#### 4.2 System affinity

Some herbs show an affinity for certain organs, body systems or even specific types of tissues. This work has tonics or nutrients for the areas involved. According to the herbalists interviewed, many herbs can be used freely and

safely as part of one's life style and need not be thought of as medicines. They are not at their best when used to nurture health and vitality and therefore prevent the development of health problems. According to healers, during illness, herbs with system affinities will enhance the general health of a particular organ or body system when combined with remedies selected for specific actions. They are useful when administered for a certain illness but no overt pathology is present. By using herbs in this way, the healers may be able to overcome a weakness that could lead to a disease later in life.

#### 4.3 Specific remedies for illness

The wealth for herbal knowledge that has been garnered through the generations includes; the use of many plants that are traditionally specific for the treatment of certain diseases of symptoms. While holistic healing aims to go beyond symptomatic therapy, this knowledge deserves great respect. An understanding of specific remedies for illness can add much to a prescription based on appropriate actions and system support. However specifics always do not exist.

#### 4.4 Herbal biochemistry

Presently, intervening attention is "being paid to the biochemistry of active herb constituents". Research has led to the development of many life-saving drugs, but this is a very limited approach when it comes to using whole plants. In the hands of an experienced herbalist, knowledge of plant pharmacology can add to the healing possibilities but not as much as often believed.

#### 4.5 Intuition

During this research, it was found that an intuitive rapport flowers between the experienced herbalist and the plants in their *materia medica*. Intuition has a special role to play in the healing and the unique relationship between the plants and people augments it well. Such insightful intuition does always not flow freely but it should be embraced when it does. However, according to the healers, intuitive knowledge should always be checked against reference materials if at all possible, for example, if a practitioner is not clear on the differences among bear berry, bar berry and bill berry, unfortunate mis-understanding can arise.

#### 4.5 Phytotherapeutic selection criteria

There is nothing inherent in a plant that defines the way it should be used, and considering the herbal abundance of our world, some coherent selection criteria are essential to guide phytotherapists in their healing work. In Kenya, herbalists routinely use approximately more than 500 plant remedies. These herbalists are obviously applying some set of guidelines in order to whittle down 500 possible plant remedies to a more manageable figure but are they? According to the traditional healers, there are a number of traditional ways to group the relevant criteria but three categories are found to be the most helpful;

1. Assessing the impacts of herbs upon the body and mind
2. Applying non-therapeutic criteria such as aesthetics, economics and ecology
3. Using herbs within the context of some kind of system

According to the healers, the application of the above criteria facilitates the formulation of some treatments that are specific to the unique needs of an individual and at the

same time, takes into account environmental and economic considerations. These results are in tandem with those of [7] who noted that the beneficial medicinal effect of plant materials (botanicals) typically results from the secondary metabolites present in plants. The medicinal actions of plants depend on their secondary metabolic products.

#### 4.6 Assessing the impact of herbs on the individual

The herbal remedies of the world vary greatly in strength from gentle tonics or food remedies to those that are potentially lethal if taken at the wrong dosage. The holistic phytotherapist works with the underlying idea that the body is self-healing and the therapist simply supports this innate healing process and thus the tonic herbs are of paramount importance, as this is exactly what they do.

A characteristic of tonics is that they are all gentle remedies that have a mild yet a profound effect upon the body. Not all herbal remedies are tonics as many have a powerful and immediate impact upon human physiology. According to healers, this must be used with the greatest respect and their use is best reserved for illness that calls for strong medicine. Identifying the intensity of a herb's impact upon, then the body provides a useful selection criteria.

#### 4.7 Non-therapeutic selection criteria

To help further in the process of selecting among herbs with similar actions, according to the healers, there are a number of non-therapeutic factors to take into account. These include aesthetic, economic and environmental.

#### 4.8 Aesthetic criteria

There is no reason that herbal medicines should always taste pleasant, when possible, taste, aroma and visual appeal are considered. These are matters of personal taste but it is fine to select from a list of herbs compiled by applying both therapeutic criteria and personal aesthetic preferences. According to healers, bitter herbs constitute the only general exception. If bitterness is indicated then the herbs must be "tasted" or much of their therapeutic potential will be lost

#### 4.9 Economic criteria

When choices arise, only common and inexpensive herbs should be used according to the healers since expensiveness does not usually equate with quality but with rarity. Expensive, rare or imported may not work more effectively than common and not very glamorous nettle or cleavers.

#### 4.10 Environmental criteria

Understanding that ecological relationships have a bearing on the healing arts can lead to some important broad implications while the choice of the most relevant therapy should be based on the needs of the individual. Donne's insight that "no man is an island" becomes crucial here. In a world where human impact on the environment is becoming life threatening, the broader implications of health practices must be taken into account.

#### 4.11 Using herbs in the context of a therapeutic system

Since the early history of medicine, people have been striving to make sense of the human body, the illness that assail it and the healing remedies used to treat it. Many models or systems of medicine have been developed, most of which are now found only in texts on the history of medicine. These findings are in agreement with those



obtained by <sup>[29]</sup> that botanicals were used internally and topically can treat early stages of hemorrhoids effectively and can be used as adjuncts in more advanced stages when surgical treatments may be necessary. A major component of a safe and effective therapy for hemorrhoids is the use of botanicals and nutritional therapies.

Ways of using herbs have been repeatedly organised and reorganised into various systems that reflect the prevailing world view held by people of different cultures and eras. Today is no exception as the herbal renaissance is, in full bloom and transformation of society still in mid-process. A number of systems are in current use, some depend on traditional knowledge, while others work within the framework of an existing philosophical system. Systems based on folk traditions of the world vary according to the tradition used. Those that work with the framework of an existing system differ depending on the philosophy at their core.

Philosophical contexts include the profoundly holistic system of Asia and Africa as well as the Western medical approach which is based on what has been called the *biomedical model*. This western system requires that herbs be used within the framework of a disease centred approach to medicine but nonetheless applies them in a holistic context.

#### 4.12 Traditional healing systems

The traditional or folk use of herbal medicines is familiar to everyone in some form or another. This is the way in which information about herbs has been passed from generation to generation but not questioning on reliance on empirical evidence also gives herbalism a bad name among members of the scientific community <sup>[19]</sup>. Their loss, folk wisdom is of mestimable value and relevance. Generations of accrued experience and insight are not to be taken lightly. As an example, consider the fact that these same folk remedies from around the world often point the way for pharmacologists for new and powerful medicines. The use of *Dioscorea spp* (wild yam) as a source of hormone precursors and the application of *Catharanthus roseus* (Madagascar periwinkle) in anti-leukaemia drugs are appropriate examples.

The bulk of the world's health care is still based on the traditional use of local herbal remedies of the in relation to this. Globally, folk use is recognised by the World Health Organisation (WHO) and promoted through its Traditional Medicine Program <sup>[30]</sup>. Every culture of the world has its own herbal tradition which may be either a thriving aspect of modern life or a more or less moribund historical memory. However, fundamentally valuable as a traditional folk knowledge, it has limited application within modern holistic herbal practise. An application of herbal remedies that relates specific plants to specific diseases or symptoms is little more than what we might call "organic drug therapy". Simply using remedies for symptomatic relief ignores all the insights of holistic medicine. Thus the ancient folk traditions of the world provide a wonderful foundation upon which today's medical herbalistic may build the holistic herbalism of the future.

#### 4.13 Philosophical systems

Phytotherapy offers the most value to holistic medicine when used within the context of a coherent philosophical system. Such systems work within intellectual and

conceptual models and understanding what a human being is and what a disease process is. Each system's concept of health and human wholeness must be seen as a sub-set of the paradigm held by that culture as to the nature of the world itself. In line with these findings, <sup>[1]</sup> had also noted that these paradigms were reflected in the holistic medical systems of China and India as well as in the reductionist approach taken in the biomedical model of the Western medicine.

#### 5. Conclusion

The Abagusii community had a variety of botanicals which were potentially able in the treatment of hemorrhoids. Hemorrhoids are a common discomfort that have a potential to occur in both male and female individuals. Hemorrhoids are getting chronic by prolonging immediate treatment, which directly impacts on one's behavior and performance at work, thus early treatment is recommended to cure as soon as it occurs. However, like other common ailments, hemorrhoids can also be prevented by embracing proper food habits with common botanicals. In early stages of hemorrhoids, it can be completely cured by use of botanicals. Additionally, change in one's life style, diet habit, and intake of appropriate dose of proper botanicals intervenes in the pathogenesis to decrease vascular integrity and help in hemorrhoids cure.

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#### 7. Conflict of interest

The authors declare that there is no conflict of interest in the publication of this work.

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