REVIEW ARTICLE

inventi Spreading Knowledge

Herb's Used in Psychological Disorders

Aejaz Ahmed[1]*, Sayyad Nazim[2], Zafar Ahmad[3], Mohd. Zameeruddin[1], Noolkar Sohel[4]

Abstracts: An Herb is a plant or plant extract, including leaves, bark, berries, roots, gums, seeds, stems and flowers which are bestowed with nourishing and healing. An herb is a plant or plant extract, including leaves, bark, berries, roots, gums, seeds, stems and flowers which are bestowed with nourishing and healing elements. Herbs are the endowment of Mother Nature which has been used for healthcare through out different ages and cultures of human history. Herb's have various useful chemical constituents which is useful for treatment of various Psychological disorder like Schizophrenia. Depression, Anxiety & Panic Disorders, Hallucination, Illusion, Insomnia, Body Dysmorphic Disorder, Signs of Mental illness, Suicide, False Memory. So we require Pharmacognostic, Pharmacological, Ethano-pharmacological parameters of the Herbs for studying the activities useful in the treatment of Psychological disorders. So our study aim's at screening the all parameters related to Herbs which is for Researchers and the students whose work on those topics. The present study elicits on all the aspects of the herbs and throws attention to set the mind of research scientist to carry out the work for developing its various formulations used in Psychological disorders which can ultimately beneficial for humans beings.

Key Words: Psychological disorders, Anti-psychotic drugs, herbal treatment

INTRODUCTION

In the twentieth century in the United States, a mental hygiene movement developed, aiming to prevent mental disorders. Clinical psychology and social work developed as professions. World War I saw a massive increase of conditions that came to be termed "shell shock." The term stress, having emerged out of endocrinology work in the 1930s, was increasingly applied to mental disorders. Electroconvulsive therapy, insulin shock therapy, lobotomies and the "neuroleptic" chlorpromazine came to be used by mid-century. An antipsychiatry movement came to the fore in the 1960s. Deinstitutionalization gradually occurred in the West, with isolated psychiatric hospitals being closed down in favor of community mental health services. A consumer/survivor movement gained momentum. Other kinds of psychiatric medication gradually came into use, such as "psychic energizers" and lithium. Benzodiazepines gained widespread use in the 1970s for anxiety and depression, until dependency problems curtailed their popularity [1].

[1]Department of Pharmaceutical Chemistry, Ali Allana College of Pharmacy, Akkalkuwa, Dist. Nandurbar 425 415, India
E-mail: aejazboraji@rediffmail.com
*For correspondence

[2]Department of Pharmaceutics, Ali Allana College of Pharmacy, Akkalkuwa, Dist. Nandurbar 425 415, India

[3]Department of Pharmaceutics, Royal College of Pharmaceutical Education and Research, Malegaon, Dist. Nashik 423 203, India

[4]Bharati Vidyapeeth College of pharmacy, Kolahapur (M.S), India

The prevalence of mental health problems, particularly depression and anxiety, in the general population is around one in six people, and around 40% of people with mental health problems will have symptoms of both anxiety and depression. Drug acting on the central nervous system (CNS) include the centrally acting (mainly opoid) analgesics, anti-epileptics and anti-parkinsonian agents, as well as those for psychiatric disorders. Increasing number of patients express a preference for the use of remedies they perceive to be natural and Physicians recommend herbal remedies in the selected cases. It is becoming increasingly important for physician to be familiar with the herbal remedies commonly used in the patient problems they serve. Since the mental illness are diverse and individual patients are biochemically unique, a larger number of drugs will increase the likelihood of finding a beneficial medication, Hence in future times psychiatric patients will probably have medications with improved effectiveness and with less side effects.

Herb's have various useful chemical constituents which is useful for treatment of various Psychological disorder like Schizophrenia. Depression, Anxiety & Panic Disorders, Hallucination, Illusion, Insomnia, Body Dysmorphic Disorder, Signs of Mental illness, Suicide, False Memory. So we require Pharmacognostic, Pharmacological, Ethano-pharmacological parameters of the Herbs for studying the activities useful in the treatment of Psychological disorders. So our study aim's at screening the all parameters related to Herbs which is for Researchers and the students whose work on those topics. It is helpful for many mental health professionals, particularly psychiatrists, seek to diagnose individuals by ascertaining their particular mental disorder [2].

The present study elicits on all the aspects of the herbs and throws attention to set the mind of research scientist to carry out the work for developing its various formulations used in Psychological disorders which can ultimately beneficial for humans beings. Drugs of plant origin are important in all these areas, although not usually for self-medication. They are also of historical interest; for example, the antipsychotic drug reserpine, isolated from *Rauwolfia* species, revolutionized the treatment of schizophrenia and enabled many patients to avoid hospitalization before the introduction. A Psychological disorder or mental illness is a psychological or behavioral pattern that occurs in an individual and is thought to cause distress or disability that is not expected as part of normal development or culture [3].

HERB's

An Herb is a plant or plant extract, including leaves, bark, berries, roots, gums, seeds, stems and flowers which are bestowed with nourishing and healing. An herb is a plant or plant extract, including leaves, bark, berries, roots, gums, seeds, stems and flowers which are bestowed with nourishing and healing elements. Herbs are the endowment of Mother Nature which has been used for healthcare through out different ages and cultures of human history. Being negligent to the value of herbs due to chemical medicines, human lost synchronization to the rhythm of Nature and thus suffered various side effects. Herbs have the elements that help the human body to live in harmony with nature and its laws. According to the most ancient system of natural medication, Ayurveda, herbs work depending on the Self Correcting Mechanism and balance of three elements "Vata", "Pitta" and "Kaplan" in the human body. Herbal treatment not only heals but also looks after the body to live a healthy and fruitful life. Herbs have been used for healthcare through out the human history and are once again being recognized for their true value [4, 5].

What Drugs Treat Anxiety Disorders? [6]

Antidepressants, particularly the SSRIs, may also be effective in treating many types of anxiety disorders. Other anti-anxiety medications include the benzodiazepines, such as Valium, Ativan, and Xanax. These drugs do carry a risk of addiction so they are not as desirable for long term use. Other possible side effects include drowsiness, poor concentration, and irritability.

What Drugs Treat Psychotic Disorders?

Antipsychotics are a class of drugs used commonly to treat psychotic disorders. The antipsychotics vary in their side effects, and some people have more trouble with certain side effects than with others. The doctor can

2010ep199, CCC: $10 © Inventi Journals (P) Ltd
Published on Web 16/10/2010, www.inventi.in

inventi Spreading Knowledge

Table 1: Aim and Objectives of the present compilation

Sr. No.	Aims/Objective
1	To focus Mental Health problems in Society and its specific treatment
2	To study the Herbs used in therapy of psychological disorders
3	To study, the efficacy and potency of herb's for the treatment of Psychological disorders
4	To spot light on herbal therapies used in Psychological disorders
5	To explore various application of the Herbal for Psychological disorders and its relevance

Table 2: Summary of plants used in psychological disorders

Sr. No.	Plant	Biological Source	Family	Part of plant used
1	Rauwolfia	*Rauwolfia serpentina Benth.*	Apocynaceae	Dried roots
2	Brahmi	*Bacopa monnieri* L	Scrophulariaceae	Extract of plant
3	Liquorice.	*Glycyrrhiza glabra Linn*	Leguminosae	Dried, peeled or unpeeled, root and stolon
4	Mandukaparni	*Centella asiatica (Linn.)*	Apiaceae	Dried aerial parts, preferably leaves
5	St. John's Wort	*Hypericum perforatum*	Clusiaceae	Extract of plant
6	Panax Ginseng	*P. quinquefolius* OR *P. japonicus*	Araliaceae	------
7	Echinacea	*Echinacea angustifolia* AND *E. purpurea*	Asteraceae Compositaceae	Different products use different parts of the plants; mostly roots
8	Saw Palmetto	Serenoa repens OR Sabal serrulata	----	Ripe berries
9	Kava	*Piper methysticum*	Piperaceae	Dried rhizome
10	Valerian	*Valeriana officinalis*	Valerianaceae	Roots
11	Ashwagandha	*Withania somnifera*	Solanaceae	Roots

Table 3: Use of different herbal plants in the treatment of different mental disorders

Sr. No.	Herbal medicinal plants	Use in Psychological Complication
1	Rauwolfia	Depress activity of the central nervous system and act as hypnotics
2	Brahmi	Epilepsy and Asthma, Anti-anxiety effects
3	Liquorice.	Hoxsey anti-cancer formula, mild laxative, Hepatoprotective
4	Mandukaparni	Has effect on learning, memory and biogenic amine turnover, when tested on oxidative stress parameters
5	St. John's Wort	Antidepressant, In the treatment of alcoholism, Antibacterial
6	Panax Ginseng	Sedative, Hypnotic, Demulcent, Aphrodisiac, Antidepressant and Diuretic activity
7	Echinacea	Stimulation of the immune system; local anesthesia; anti-inflammatory, hormonal, antiviral, and free radical–scavenging activities.
8	Saw Palmetto	In the treatment of benign prostatic hyperplasia, Aphrodisiac; to enhance sperm production to increase breast size and to increase libido.
9	Kava	Anxiolytic effects, central muscle-relaxing action and an anticonvulsant action
10	Valerian	Mild hypnotic to induce sleep and relieve anxiety.
11	Ashwagandha	Nervine sedative, anxiolytic and antidepressant

change medications or dosages to help minimize unpleasant side effects. A drawback to some anti-psychotic medications is that the person's ability to tolerate the medication may change, limiting long-term use. Most side effects of antipsychotic drugs are mild and many go away after the first few weeks of treatment [7].

Herbal Medicines and Treatment can be Divided into Eight Branches

- Ayurveda
- General medicine
- Surgery
- ENT & Eye Disease
- Toxicology
- Psychiatry
- Pediatrics
- Gynecology, Sexology & Virility

HERB'S USED IN TREATMENT OF PSYCHOLOGICAL DISORDERS

Rauwolfia [8]

Plant name: Rauwolfia

Biological Source: Rauwolfia consists of dried roots of plant known as *Rauwolfia serpentina Benth.*

Family: Apocynaceae

Chemical Constituents

Rauwolfia serpentina, commonly known as or Indian Snakeroot or Sarpagandha, contains a number of bioactive chemicals, including ajmaline, deserpidine, rescinnamine, serpentinine, and yohimbine.

Medicinal Uses

Reserpine is an alkaloid first isolated from R. serpentina and was widely used as an antihypertensive drug. It had drastic psychological side effects and has been replaced as a first-line antihypertensive drug by other compounds that lack such adverse effects, although combination drugs that include it are still available in some countries as second-line antihypertensive drugs. Other plants of this genus are also used medicinally, both in conventional western medicine and in Ayurveda, Unani, and folk medicine. Alkaloids in the plants reduce blood pressure, depress

2010ep199, CCC: $10 © Inventi Journals (P) Ltd
Published on Web 16/10/2010, www.inventi.in

Figure 1: Rauwolfia Plant

Figure 2: Bacopa monnieri (Brahmi) Plant

Figure 3: Liquorice Plant

Figure 4: Centella Asiatica Plant

Figure 5: St. John's Wort Plant

Figure 6: Kava (Piper methysticum)

Figure 7: Veleriana officinalis (Valerian) Plant

Figure 8: Withania somnifera (Ashwagandha) Plant

2010ep199, CCC: $10 © Inventi Journals (P) Ltd
Published on Web 16/10/2010, www.inventi.in

inventi Spreading Knowledge

activity of the central nervous system and act as hypnotics.

Brahmi (*Bacopa monnieri*) [9, 10]
Plant name: *Bacopa monnieri.* (Brahmi)
Biological Source: *Bacopa monnieri* L is an annual creeping plant found throughout India in wet, damp and marshy areas.
Family: Scrophulariaceae

Chemical Constituents
The main constituents present in Bacopa monnieri are saponins, bacoside A, bacoside B, monnierin and hersaponin, which are also responsible for the biological activity. Most of the work reported is on the alcoholic extract of the plant.

Medicinal Uses
This plant has a number of uses in Ayurveda. It is a traditional treatment for epilepsy and asthma. It has antioxidant properties, reducing oxidation of fats in the bloodstream. However, anti-epilepsy properties seem to be in very high toxic and near lethal doses, so it's only used -at much lower non-toxic dosage- as a (cognitive) additive to regular epilepsy medication. Studies in humans show that an extract of the plant has anti-anxiety effects

Mechanism of Action
Laboratory studies on rats indicate that extracts of the plant improve memory capacity and motor learning ability. Recent studies suggest bacopa may improve intellectual activity. The sulfhydryl and polyphenol components of Bacopa monniera extract have also been shown to impact the oxidative stress cascade by scavenging reactive oxygen species, inhibiting lipoxygenase activity and reducing divalent metals. This mechanism of action may explain the effect of Bacopa monniera extract in reducing beta-amyloid deposits in mice with Alzheimer's disease.

Liquorice [11]
Plant name: Liquorice.
Common Name: Jeshtamadh, Glycyrrhiza, Liquorice root, Glycyrrhizae radix, Mulethi
Biological Source: Liquorice consists of dried, peeled or unpeeled, root and stolon of *Glycyrrhiza glabra Linn.*
Family: Leguminosae.

Use in Medicine
Powdered liquorice root is an effective expectorant, and has been used for this purpose since ancient times, especially in Ayurvedic medicine where it is also used in tooth powders and is known as Jastimadhu. Modern cough syrups often include liquorice extract as an ingredient. Additionally, liquorice may be useful in conventional and naturopathic medicine for both mouth ulcers and peptic ulcers. Non-prescription aphthous ulcer treatment CankerMelts incorporates glycyrrhiza in a dissolving adherent troche. Liquorice is also a mild laxative and may be used as a topical antiviral agent for shingles, ophthalmic, oral or genital herpes. The compound glycyrrhizic acid, found in liquorice, is now routinely used throughout Japan for the treatment and control of chronic viral hepatitis, and its transaminase-lowering effect is clinically well recognized. Hepatoprotective mechanisms have been demonstrated in mice. Large doses of glycyrrhizinic acid and glycyrrhetinic acid in liquorice extract can lead to hypokalemia and serious increases in blood pressure, a syndrome known as apparent mineralocorticoid excess.

Use in Alternative Medicine
In traditional Chinese medicine, liquorice is commonly used in herbal formulae to "harmonize" the other ingredients in the formula and to carry the formula to the twelve "regular meridians" and to relieve a spasmodic cough. In herbalism it is used in the Hoxsey anti-cancer formula, and is a considered adaptogen which helps reregulate the hypothalamic-pituitary-adrenal axis. It can also be used for auto-immune conditions including lupus, scleroderma, rheumatoid arthritis and animal dander allergies.

Mandukaparni (*Centella Asiatica*) [12]
Common Name: Mandukaparni
Biological Source: Drug consists of the dried aerial parts, preferably leaves of *Centella asiatica (Linn.)*

Medicinal Use
Aqueous extract of fresh leaves has effect on learning, memory and biogenic amine turnover in albino rats and the effect is dose dependent. In double blind clinical trial conducted on 30 mentally retarded children who were free from epilepsy and other neurological conditions to study effects of C. asiatica on general mental ability, significant improvement in general ability and behavior pattern was observed after administering the drug for a period of 6 weeks. Aqueous extract of this plant was shown to improve learning and memory in shuttle box, step down paradigm and elevated plus maze in rats. When tested on oxidative stress parameters, it decreased brain levels of malondialdehyde (MDA) with a simultaneous increase in the level of glutathione. The drug also increased catalase levels. For studying general ability of mentally retarded children, a double blind trials using whole herb powder was conducted.

St. John's Wort
Plant Name: *Hypericum perforatum* (St. John's Wort) [13,14,15,16,17,18,19,20,21,22,23,24,25,26]
Common Name: St. John's wort.
Biological Source: *Hypericum perforatum* is a yellow-flowering, stoloniferous or sarmentose, perennial herb.
Family: Clusiaceae.

Chemical Constituents
Initially, hypericin (a naphthodianthrone) was considered to be the antidepressant constituent of St. John's wort, although experimental and clinical evidence has now emerged that hyperforin (a prenylated phloroglucinol) is a major constituent required for antidipressant ctivity.

Medicinal Use
St John's wort is today most widely known as an herbal treatment for depression. In some countries, such as Germany, it is commonly prescribed for mild depression, especially in children, adolescents, and where cost is a concern. Standardized extracts are generally available over the counter — however, in some countries (such as Ireland) a prescription is required. Extracts are usually in tablet or capsule form, and also in teabags and tinctures.

Use in Major Depressive Disorder
An analysis of 29 clinical trials with more than 5000 patients was conducted by Cochrane Collaboration. The review concluded that extracts of St. John's wort were superior to placebo in patients with major depression. St. John's wort had similar efficacy to standard antidepressants. The rate of side effects was twice lower than for newer SSRI antidepressants and five times lower than for older tricyclic antidepressants. St. John's wort has not been found to be effective for patients suffering from dysthymia, a less severe and more chronic variety of depression.

Other Medicinal Uses
A constituent chemical, hyperforin may be useful for treatment of alcoholism, although dosage, safety and efficacy have not been studied. Hyperforin has also been found to have antibacterial properties against gram-negative bacteria, although dosage, safety and efficacy have not been studied. A randomized controlled trial of St. John's wort found no significant difference between it and placebo in the management of ADHD symptoms over eight weeks. However, the St. John's Wort extract used in the study, originally confirmed to contain 0.3% hypericin, was allowed to degrade to levels of 0.13% hypericin and 0.14% hyperforin.

Mechanism of Action
The exact mechanism by which St John's wort and even conventional antidepressants a function is unclear and subject to conjecture. The St John's wort mechanism is believed to involve inhibition of serotonin (5-HT)

2010ep199, CCC: $10 © Inventi Journals (P) Ltd
Published on Web 16/10/2010, www.inventi.in

inventi Spreading Knowledge

reuptake, much like the conventional selective serotonin reuptake inhibitor (SSRI) antidepressants. The major active antidepressive constituents in St John's wort are thought to be hyperforin and hypericin, although other biologically active constituents present, for example, flavonoids and tannins, may also be involved.

Panax Ginseng [27,28,29,30,31,32,33,34,35,36,37,38,39]

Biological Source

Panax includes species, such as American ginseng (*P. quinquefolius*) and Japanese ginseng (*P. japonicus*).

Ginseng has been used for its alleged sedative, hypnotic, demulcent, aphrodisiac, antidepressant, and diuretic activity. It is often recommended to improve stamina, concentration, vigilance, and well-being. The pharmacologic activities of P. ginseng range from stimulation of the central nervous system to modulation of the immune system and anabolic effects.

Safety

Panax ginseng has several relatively serious adverse effects, ranging from insomnia, diarrhea, vaginal bleeding, and mastalgia to severe headache, schizophrenia, and the Stevens–Johnson syndrome. The exact incidence of these adverse effects is unknown but seems to be low. A probable interaction between warfarin and P. ginseng has also been observed.

Echinacea (Echinacea Species)

Commercially available herbal medicines are produced from three species: *Echinacea angustifolia, E. pallida, and E. purpurea.* Different products use different parts of the plants; mostly roots Echinacea preparations contain many potentially active ingredients, such as polysaccharides, glycoproteins, alkamides, and flavonoids. Pharmacologic actions include stimulation of the immune system; local anesthesia; and anti-inflammatory, hormonal, antiviral, and free radical–scavenging activities.

Uses

Echinacea has traditionally been used topically and orally for diverse indications, including wound healing, abscesses, burns, eczema, and leg ulcers. In vitro experiments suggest that a polysaccharide from E. purpurea increases the macrophage production of tumor necrosis factor, interleukin-1, and interleukin-B2. The best-researched indications are treatment and prevention of upper respiratory tract infections.

Safety

Adverse effects of echinacea preparations seem rare and consist mainly of allergic reactions, which can be severe. Adverse Drug Reactions associated with echinacea including hepatitis, asthma, rash, rash with myalgia and nausea, dizziness with swollen tongue, and anaphylaxis.

Kava (*Piper Methysticum*) [40, 41, 42, 43]

Biological Source

Kava is made from the dried rhizome of the kava plant. It is traditionally used in the South Pacific as a recreational drink. Kava has been used experimentally to attenuate seizures and to treat psychotic states. Today, it is mostly used for its anxiolytic effects. The active ingredient is a family of four pyrones (kavapyrones). Their main pharmacologic properties are a central muscle-relaxing action and an anticonvulsant action. The mechanism of the anxiolytic effect is still somewhat controversial; one theory is that kavapyrones enhance aminobutyric acid–binding in the amygdala without acting as direct antagonists at aminobutyric acid receptors. Kava pyrones also are Powerful strychnine antagonists, administration of kava is effective in reducing anxiety.

Safety

Serious adverse effects have been reported but seem to be rare. When kava is taken concomitantly with other medication that acts on the central nervous system or with alcohol, the effects of kava may be potentiated, leading to a temporal state of impaired vigilance or reduced consciousness; one such case has been reported. Long-term use of kava at high doses is associated with flaky, dry, and yellowish discoloring of the skin; ataxia; hair loss; partial loss of hearing; loss of appetite; and body weight reduction. The dermatologic signs of excessive kava use are known as kava dermopathy or kavaism; they are usually reversible on discontinuation of use.

Valeriana officinalis **(Valerian)** [44, 45]

The root of Valerian has served thousands of years as a mild sedative. From 1820 until 1942, it was listed in the U.S. Pharmacopoeia as a tranquilizer. It's widely used and approved in Europe as a mild hypnotic to induce sleep and relieve anxiety. In the United Kingdom, Valerian is also a popular and government approved sleep aid. Valerian targets the same neuroreceptors as benzodiazepines. The mechanism of Valerian tends to sedate by stimulating activity of the nerve transmitter GABA that dampens the brain's arousal system. Perhaps, Valerenic acid and Valepotriates, chemicals unique to Valerian sedate the brain cells responsible for arousal. Valerian extract in the dose of 400 to 900 mg decreases sleep latency and nocturnal awakenings and improved subjective sleep quality. Adverse effects of valerian are rare but include gastrointestinal upset, contact allergies, headache, restless sleep and mydriasis. Valerian appears to be relatively safe in overdose with the major effect being central nervous system depression.

Withania somnifera **(Ashwagandha)** [46, 47]

The plant is used as adaptogen since long time. It has been extensively investigated. The root is a nervine sedative and is used in doses of one gram in all cases of general debility nervous exhaustion, brain – fatigue and loss of memory. When the anxiolytic and antidepressant activity of *W. somnifera* (dose 20 and 50 mg/ kg) was compared with that of Lorazepam (0.5 mg/kg i.p.) and also with Imipramine (10 mg/kg i.p.), the herbal drug showed comparable results. Thus, *W. somnifera* is a effective mood stabilizer in clinical conditions of anxiety and depression. In an animal study assessing the anxiolytic and antidepressive actions of ashwagandha compared to commonly prescribed pharmaceuticals, an extract of the root was administered orally to rats once daily for five days. The results were compared to a group administered the benzodiazepine lorazepam for anxiolytic activity, and the tricyclic antidepressant imipramine for antidepressant investigation. Both the ashwagandha group and the lorazepam group demonstrated reduced brain levels of a marker of clinical anxiety. Ashwagandha also exhibited an antidepressant effect comparable to that induced by imipramine in the forced swim-induced "behavioral despair" and "learned helplessness" tests. Other similar studies confirm these results, lending support to the use of ashwagandha as an antistress adaptogen. Large doses have been shown to cause gastrointestinal upset, diarrhea, and vomiting.

Saw Palmetto (*Serenoa Repens*) [48]

The ripe berries of the American dwarf palm (Serenoa repens or Sabal serrulata) have been traditionally used to treat genitourinary problems; to enhance sperm production, breast size, or libido; and as a mild diuretic. Today, saw palmetto is almost exclusively used to treat benign prostatic hyperplasia.

Mechanism of action

The mechanisms of action are not fully understood. Animal experiments have demonstrated antiandrogen activity, and in vitro studies have shown inhibition of 5-_-reductase, the enzyme that converts testosterone to its active metabolite dihydrotestosterone. Another relevant pharmacologic action may be inhibition of estrogen receptors in the prostate. Reductions in size of the prostate gland have not been uniformly observed clinically.

Medicinal Uses

2010ep199, CCC: $10 © Inventi Journals (P) Ltd
Published on Web 16/10/2010, www.inventi.in

inventi Spreading Knowledge

It is used in the treatment of benign prostatic hyperplasia. Other uses are as an aphrodisiac, to enhance sperm production, to increase breast size and to increase libido. It is also a mild diuretic. In some cases it is employed to treat genitourinary problems.

OTHER HERBS USED IN MENTAL DISORDER [49, 50]

Japanese formulations like Sho – ju – sen [Kumazasa leaf (*Sasa kurinensis* makino et Sibata), Japanese red pine leaf (*Pinus densiflora* Sieb et Zucc) and Ginseng radix (*Panax ginseng* c.A. Mayer)], Chinese formulation Suanzaoentang [*Zizyphi Legustrum with* liquorice, Chinese herbs Poria and Bung root] have been studied for their effect on depression and anxiety where they were found effective against the conventional drugs like Diazepam. *Plantago asiatica*, *Scruphularia ningpoensis*, *Ilex pubescens* are the traditional Chinese medicines prescribed for treating depression like ailments in Chinese medical practice. *Peaonia emodi* Wall. is an ingredient of Shimotsu, a traditional Chinese medicine shown to improve spatial working memory in rats. Some other herbs like *Passiflora incarnata* (Passion flower), *Evolvulus alsinide Scutellaria lateriflora* (Scullcap herb) are studied for their activity against nervousness, restlessness; sleeplessness. The herbs like *Celastrus paniculatus* Wild., *Acorus calamus* Linn., *Piper longum* Linn. are claimed as brain tonics. *Clitoria ternatia* Linn. is used as memory stimulant. The herbs *Eugenia caryophyllus* Spl. , *Glycyrrhiza glabra* Linn. *Tinnospora cordifolia* F. Vill exhibit their activity in mental disorders by acting on Acetalcholine content. *Lawsonia inermis* Linn, *Nardostachys jatamansi* DC are also important herbs used in mental disorders.

Role of Essential Oils [51]

The essential oils can be used in an aromatherapy room diffuser to reduce depression, anxiety and stress to enhance mood. The oils like that of Citrus bergamia (Bergamot), Juniperus virginiana (Cedarwood), Anthemis nobilis (Chamomile), Lavendula officinalis (Lavender), Citrus limon (Lemon), Rosa centifolia (Rose), Santalum album (Sandalwood) etc are mainly used in treatment of mild to severe depression, anxiety and stress. These oils are mainly used in the form of inhalation, bath, massage or steam treatments. However their use is limited to external application. Some of them may cause phototoxicity (eg Bergamot oil); some of them may result in skin irritation and rashes (e.g. Lavender oil). Use of few oils is restricted during pregnancy (e.g. Cedarwood oil, Chamomile oil etc).

CONCLUSION

The prevalence of mental health problems, particularly depression and anxiety, in the general population is around one in six people, and around 40% of people with mental health problems will have symptoms of both anxiety and depression. Drug acting on the central nervous system (CNS) include the centrally acting (mainly opoid) analgesics, anti-epileptics and anti-Parkinson agents, as well as those for psychiatric disorders.

The therapy for treatment of Psychological disorders are Somatotherapy (type of pharmacotherapy; biology-based treatments), Psychiatric medications (psychoactive used in psychiatry), Antianxiety drugs (anxiolytics), Antidepressant drugs, Antipsychotic drugs, Mood stabilizers , Shock therapy also known as convulsive therapies, Insulin shock therapy (no longer practiced), Electroconvulsive therapy, Psychosurgery, Leukotomy (prefrontal lobotomy; no longer practiced), Bilateral cingulotomy ,Deep brain stimulation, Psychotherapy (psychology-based treatment), Cognitive Behavior Therapy, Psychoanalysis, Interpersonal psychotherapy, Behavior Therapy but this therapies shows few adverse effects, expensive and time consuming thus to avoid these complications herbal drugs therapy are one of the good way of treatment. Many of herbal drugs have reached to the stage of clinical trials. The current review is focused on various herbs, which can be used in treatment of various mental disorders along with their pharmacological and clinical evidence.

REFERENCES AND NOTES

1. YN Singh. Kava: an overview. J Ethnopharmacol. 37: 13-45 (1992)
2. KD Tripathi. Drugs used in mental illness, Essentials of Medical Pharmacology. (Jaypee Brothers, New Delhi, 4, pp 403 – 11, 2001)
3. Lakshami Chandra Mishra. Psychiatric diseases, scientific basis for Ayurvedic therapies. (CRC Press, pp 439 –50, 2004)
4. Blumenthal M. ed. Complete German Commission E monographs; therapeutic guide to herbal medicines. (Austin, Tex.: American Botanical Council, 1998).
5. T Boniel, P Dannon. The safety of herbal medicines in the psychiatric practice. Harefuah. 140 (8): 780 – 3, 2001.
6. G Harner, V Schulz. Clinical investigation of the antidepressant effectiveness of Hypericum. Journal of Geriatric Psychiatry and Neurology, 7: 6 – 8, 1994.
7. Wilson and Gisvol's Textbook of Organic Medical and Pharmaceutical Chemistry. (Escitalopram 519-520).
8. J C Kurian. Plants that Heal. Volume-1, Rauwolfia-122.
9. J Stough, J Lloyd, J Clarke, L Downey, C Hutchison, T Rodgers, P Nathan. "The chronic effects of an extract of Bacopa monniera (Brahmi) on cognitive function in healthy human subjects". Psychopharmacology (Berl) 156 (4): 481–4. (2001). PMID 11498727.
10. L D'Angelo , R Grimaldi , M Caravaggi, et al. A double-blind, placebo-controlled clinical study on the effect of a standardized ginseng extract on psychomotor performance in healthy volunteers. J Ethnopharmacol. 16: 15-22. 1986.
11. H A Sigurjonsdottir et al. Liquorice-induced rise in blood pressure: a linear dose-response relationship. Journal of Human Hypertension 15: 549-552, (2001).
12. J C Kurian. Plants that Heal. Volume-1, Centella Asiatica-50.
13. G Harner, V Schulz. Clinical investigation of the antidepressant effectiveness of Hypericum, Journal of Geriatric Psychiatry and Neurology. 7: 6 – 8, 1994.
14. VH Muldner, M Zoller. Antidepressant effect of Hypericum extracts standardized to the active hypericin complex, Biochemical and Clinical studies, Arzneim – Forsch, 34 (8): 918 – 920, 1984.
15. J M Cott. In vitro receptor binding and enzyme inhibition by Hypericum perforatum extract. Pharmacopsychiatry 30: 108-12, 1997.
16. Y N Singh. Potential for interaction of kava and St. John's wort with drugs, J Ethnopharmacol, Vol. 100, No. 1-2, 108-113, 2005.
17. S S Chatterjee, K Bhattacharya, M Wonnemann, A Singer and W E Müller. Hyperforin as a possible antidepressant component of Hypericum extracts, *Life Sci*. **65:** 2395–2405 (1998).
18. R Brenner, V Azbel, S Madhusoodanan and M Pawlowska. Comparison of an extract of Hypericum (LI 160) and sertraline in the treatment of depression: a double-blind, randomized pilot study, *Clin. Ther.* 22: 411–419, (2000).
19. J De Vry, S Maurel, R Schreiber, R de Beun and K R Jentzsch. Comparison of hypericum extracts with imipramine and fluoxetine in animal models of depression and alcoholism, *Eur Neuropsychopharmacol*. 9: 461–468, (1999).
20. V Beijamini and R Andreatini. Effects of Hypericum perforatum and paroxetine on rat performance in elevated T-maze, *Pharmacol. Res*. 48: 199–207, (2003).
21. V Butterweck, V Christoffel, A Nahrstedt, F Petereit, B Spengler and H Winterhoff. Step by step removal of hyperforin and hypericin: activity profile of different *Hypericum* preparations in behavioral models, *Life Sci*. **73:** 627–639, (2003).
22. V Butterweck. Mechanism of action of St John's wort in depression: what is known? *CNS Drugs* 17: 539–562, (2003).
23. G Calapai, A Crupi, F Firenzuoli, G Inferrera, F Squadrito, A Parisi, G Sarro and A Caputi. Serotonin, norepinephrine and dopamine involvement in the antidepressant action of Hypericum perforatum, *Pharmacopsychiatry* 34: 45–49, (2001).
24. M Rolli, C Schafer and W E Muller. Effect of Hypericum extract (LI160) on neurotransmitter receptor binding and synaptosamal reuptake system, *Pharmacopsychiatry* 28: 207–210, (1995).
25. M Franklin, A Reed and H Murck. Sub-chronic treatment with an extract of Hypericum perforatum (St John's wort) significantly reduces cortisol and corticosterone in the rat brain, *Eur.Neuropsychopharmacol*. 14: 7–10, (2004).
26. P Frost, S Bornstein, M Ehrhart-Bornstein, F O'Kirwan, C Huston, D Heber, V Go, J Licinio and M L Wong. The prototypic antidepressant drug, imipramine but not Hypericum perforatum (St. John's Wort) reduces HPA-axis function in the rat, *Horm. Metab. Res.* 35: 602–606, (2003).

2010ep199, CCC: $10 © Inventi Journals (P) Ltd
Published on Web 16/10/2010, www.inventi.in

27. C Siegl , H J Siegl. The possible revision of impaired mental abilities in old age: a double-blind study with Panax ginseng [in German]. Therapiewoche. 29: 4206, 4209, 4216. 1979.
28. K A Wesnes, R A Faleni, N R Hefting et al. The cognitive, subjective, and physical effects of a ginkgo biloba/panax ginseng combination in healthy volunteers with neurasthenic complaints. Psychopharmacol Bull. 33: 677- 683, 1997.
29. D O Kennedy, A B Scholey and K A Wesnes. Modulation of cognition and mood following administration of single doses of Ginkgo biloba, ginseng, and a ginkgo/ginseng combination to heathy young adults. Physiol Behav. 75: 739 - 751, 2002.
30. K A Wesnes, T Ward , A McGinty et al. The memory enhancing effects of a Ginkgo biloba Panax ginseng combination in healthy middle-aged volunteers. Psychopharmacology (Berl). 152: 353 - 361, 2000.
31. C A Baldwin, L A Anderson and J D Phillipson. What pharmacists should know about ginseng. Pharm J. 237: 583 - 586, 1986.
32. F G Hess, R A Parent, G E Cox et al. Reproduction study in rats on ginseng extract G115. Food Chem Toxicol. 20: 189 - 192, 1982.
33. C Newall, L A Anderson and J D Phillipson. Herbal Medicines: A Guide for Health-Care Professionals. (London: Pharmaceutical Press. 143,148, 1996).
34. U Sonnenborn, Y Proppert. Ginseng (Panax ginseng C.A. Meyer). Br J Phytother. 2: 3 - 14, 1991.
35. A Fugh-Berman. Herb-drug interactions. Lancet 355: 134 -138, 2000.
36. E M Greenspan. Ginseng and vaginal bleeding [letter]. JAMA; 249: 2018, 1983.
37. T G Hammond, J A Whitworth. Adverse reactions to ginseng [letter]. Med J Aust. 1: 492, 1981.
38. B V Palmer, et al. Gin Seng and mastalgia [letter]. Br Med J. 1: 1284, 1978.
39. R Punnonen , A Lukola. Oestrogen-like effect of ginseng. Br Med J. 281: 1110, 1980.
40. V Schultz, R Hansel and V E Tayler. Rational phytotherapy: a physician's guide to herbal medicine, (Berline, Springer – Verlag. 1998)
41. Y N Singh. Kava: an overview. J Ethnopharmacol. 37: 13-45, 1992.
42. J C Almedia, E M Grimsley. Coma from the health food store: interaction between kava and alprazolam [Letter]. Ann Intern Med 125: 940-41, 1996.
43. A Jussofie, A Schmiz and C Hiemke. Kavapyrone enriched extract from *Piper methysticum* as modulator of GABA binding site in different regions of rat brain. Psychopharmacology (Berlin). 116: 469-74, 1994.
44. G Balderer, A A Borbely. Effect of Valerian on human sleep, Psychopharmacology, 87: 406 – 409, 1985.
45. P D Leathwood, F Chauffard, E Heck et al. Aqueous extract of Valerian root (Valeriana officinalis L) improves sleep quality in man, Pharmacology, Biochemistry and Behavior, 17: 65 – 71, 1982.
46. S K Bhattacharya, A Bhattacharya, K Sairam and S Ghosal. Anxiolytic antidepressant activity of Withania somnifera glycowithanoloids: an experimental study, Phytomedicine, 7 (6): 463 – 469, 2000.
47. R Archana, A Namasivayam. Antistressor effect of Withania somnifera. J Ethnopharmacol 64: 91-93, 1999.
48. A K Nadkarni, Dr. K M Nadkarni's Indian Materia Medica. Popular prakashan, Bombay, 3, Vol. 1: 263, 296, 1292, 1976.
49. H Kuribara, H Tomioka, R Takahashi, K Onozato, N Murohashi, T Numajiri, H Iwata and S Koya. An antidepressant effect of Sho-ju-sen, a Japanese herbal medicine, assessed by learned helplessness model in mice, Phytother Res, 18(2): 173-76, 2004.
50. C Xu, L Luo and R X Tan, Antidepressant effect of three traditional Chinese medicines in the learned helplessness model, Ethnopharmacology. 91 (2-3): 345 – 349, 2004.
51. Jacqueline Young, Aromatherapy oils, BBC Health, Oct. 2002.

2010ep199, CCC: $10 © Inventi Journals (P) Ltd
Published on Web 16/10/2010, www.inventi.in