

Herbs for brain disorder

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Abstract

This year's slogan for WHO is "Depression-Let us talk". So brain disorder is major emerging problem of this century. 5% of total population of India is suffering from mental disorders. These are the known reported case, but actually the brain disorder patients are more. Because of social problem, people are not ready to accept that they are suffering from mental problem. Conventional treatment for these problems includes hypnotic drugs, sedative drugs, mood elevating drugs, hormonal treatment etc. having lots of side effects. In Indian tradition, Ayurveda treatment gives best solution for it. When I review these known traditional herbs on the basis of modern parameters, I found that they are highly effective, having most promising results Herbs are enough capable to reduce stress, anxiety, depression, also they have good result to increase cognition, mental ability and intelligence. Herbs are also effective to cure Parkinson's, varicose veins, impaired blood supply, etc.

In this study I review the effect of Ashwagandha, brahmi, shankhpushpi, mandukparni, amla and tulsi, and I found that they are very effective in brain disorders.

Keywords: Herbs, Anxiety, Depression, Mental disorder, Cognition, Amla, Ashwagandha, Brahmi, Tulsi, Vata, Pitta, Kapha

Introduction

Many of the diseases and disorders that affect the brain are progressive and their incidence and prevalence increase with age. Brain related disorders is major emerging problem of 21st century. Although modern medicine got lots of information about brain and it's functions, many biochemical etiologies for mental illness are discovered and powerful psychiatric medications are created there is vast scope for Ayurvedic intervention in psychiatric illness.

A recent report released by the Federal Interagency Forum on Aging-Related Statistics states that 35.8% of those 85 or older have moderate or severe memory impairment. Persons 85 years and older are the fastest growing segment of the population. By 2020, it is estimated that it will be almost twice as many as there are today.

The loss of cognitive and functional abilities affect the individual and his or her family in profound ways. Caring for adults with cognitive impairments is often very stressful and demanding. Caregivers cope with their loved ones' memory loss, behavioral and personality changes, chronic care needs and the high costs of care. Care giving can span decades, can impact both the physical and mental health of the caregiver and can result in extreme economic hardship.

It is estimated that the incidence and prevalence of the major causes of brain impairment in adulthood in the United States in general and in California in particular. It estimates 1.2 million people aged 18 years and older who are diagnosed annually with adult onset brain disease/disorders in the United States (i.e., the incidence), also estimates that between 13.3 and 16.1 million individuals age 18 and over are afflicted with common brain disorders and diseases (i.e., the number of people currently living with the impairment, or prevalence). An estimated 13% - 16% of the United

States and California households may be dealing with the burden of caring for a loved one with an adult-onset brain disease/disorder.

So it is important to give good solution for brain disorders. Traditional Indian herbs are used for this purpose since many years. Ashwagandha, Brahmi, Shankhpushpi, Amla, Tulsi these herbs are discussed in this topic which are known herbs for brain disorder in Ayurved, and also they are proven on the basis of modern parameters.

Ayurvedic and pharmacological view of traditional herbs in brain disorder

Traditional herbs are reputed for its results in India over 3000yrs to cure brain disorders. Some pharmacologically tested drugs are—

- Ashwagandha [Withania Somnifera]
- Brahmi [Bacopa monniera]
- Mandukparni [Centella asiatica]
- Shankhpushpi [convolvulus pluricaulis]
- Amla [Embllica officinalis]
- Tulsi [Ocimum sativum] holy basil

Ashwagandha (Withania somnifera)





Properties as per ayurvedic text

- **Rasa**-Sweet, astringent, bitter, **Vipak**- sweet, **Properties**- Light, unctuous,
- **Uses as per ayurvedic text**-Strength giving, Kaphavata balancing Used in Vertigo, Insomnia-swapjanaan

Uses proved on modern parameters

- Growth promoter
- Memory improving
- It's active ingredient Glycowithanolids having antistress property and it is good immunomodulator.
- Useful against intracellular pathogen
- Effective in immune suppressed diseases.
- Action on cortical and basal forebrain-to improve memory
- Glycowithanolides useful to cure Alzheimer's disease
- Reverse cognitive deficit-improves neurodegenerative changes—so it is neuroprotective
- Anxiolytic
- Antidepressant
- Mild tranquilizer
- Acts as anti-inflammatory analgesic so it is Cytoprotective
- Immunomodulatory
- Antioxidants- glycowithanolides Prevent tumor necrosis factor
- Protective against some cancers
- Protective against Parkinson's disease
- Effective in epilepsy
- Role in management of drug addiction.

Brahmi (*Bacopa monnieri*)

- **Rasa**-bitter, astringent, **Vipak**-Sweet, **Veerya**-Cold
- Tridosha balancing
- **Use as per ayurvedic text**—Epilepsy, Mental disorders
- Medhyarasayana



Uses proved on Modern parameters

- Increases brain activity
- Revitalizing herb-strengthens nervous function and memory
- Improve memory and intellectual, Active ingredient-bacosides-induces membrane dephosphorylation—increases in protein and RNA turnover in specific brain areas.
- Protein-kinase activity in hippocampus—Thus prevents loss of cholinergic neural activity in brain area hippocampus which is primary feature of Alzheimer's disease
- Reverse adverse effect in nucleus basalis
- Antioxidants
- Memory and attention disorder
- Recovers drug induced cognitive deficit.
- Neuroprotective-against aluminum induced oxidative stress in hippocampus of rat brain genoprotective-protective against brain damage
- Aqueous extract of brahmi reduces nicotine induced lipid peri-oxidation.
- Anxiolytic
- Antidepressant
- Antioxidants, Anticonvulsive
- Antistress, antidepressant
- Memory and attention disorder

Mandukparni-(*Centella asiatica*)





Properties as per ayurvedic text

- Rasa-bitter, astringent, sweet, Vipak-sweet, Veerya-cold, Kaphapitta balancing
- Medhya rasayana
- Rasayana
- Uses- Effective in brain weakness, Mental disorders, Epilepsy, Pronaunsation disorder

Properties proved on modern parameters-

- Better circulation
- Memory enhancement
- Sedative
- Antistress
- Antianxiety
- Aphrodisiac
- Immune booster
- Revitalise connective tissue Detoxify body
- Primary and secondary symptoms associated with chronic venous insufficiency
- Effective in venous disease
- Repair of damaged neurons- Reverse neurodegenerative changes
- Fast axonal regeneration
- Neuronal dendritic growth stimulating property— stress, neurodegeneration, memory disorder.
- Venous hypertensive microangiopathy
- Anti-inflammatory property
- Potent antioxidants
- Antidepressant
- Anticonvulsive
- Memory enhancement

Shankhapushpi (Convolvulus pluricaulis)

Properties as per ayurvedic text

- Rasa-bitter, astringent, pungent Vipak-Sweet, Veerya-cold
- Tridosha balancing
- Brain tonic, nervine tonic, Sleep inducing
- Useful for mental disorder in acute stage also
- Rasayan
- Reduces heat in body
- Epilepsy



Properties proven on modern parameters-

- Anti-anxiety
- Insomnia, Mental fatigue, Panic attacks, Nervousness
- Regulating body stress hormone adrenaline & cortisol
- Antiepileptic activity, Better concentration

Amla (Emblica officinalis)



- **Rasa**-sour, sweet. pungent, bitter, astringent, **Vipak**-Sweet
- **Veerya**-cold, **properties**- Dry, light, Tridosha balancing, Rasayana
- Gives strength to nerves and majja, and senses
- Prevent noise-stress induced changes in antioxidants and cell mediated immune response
- Prophylactic against dyskinesia
- Prevent neurodegenerative changes- age related
- Effective for tremors, tonic-clonic convulsions of nicotine, Effective in convulsion, Antioxidants activity-keeps healthy
- Rich source of ascorbic acid, and vit C -45-70%
- Memory score improvement
- Brain cholinesterase activity decreases



Tulsi-holy basil (*Ocimum sanctum*)

- Rasa-Bitter, pungent, Vipak-Pungent, Veerya-Hot
- Kaphavata balancing, Pitta increasing
- Anthelmintic

Properties proven on modern parameters-

- Decrease severity and time of electro shock
- Decrease convulsion

- Reduce noise stress induced biological changes
- Prevent leucocytosis
- Antibacterial, antiviral, Immunostimulant

Complements the effectiveness of other herbs used for brain disorders, in support of nervous system functioning, especially in response to exhaustion or other stress, promoting mental calm, clarity and steady mood. Thus these herbs are promising to cure various brains and nerve disorders.

Observation

If we summarize uses of these 5 herbs, we observe that they are effective in many neurological and brain disorder. Following table give you idea where the particular herb is effective in brain disorder.

Symptoms	Ashwagandha	Brahmi	Mandukparni	Shankhapushpi	Amla	Tulsi
Doshagnata	Kaphavata pacifying	Tridosha pacifying	Kaphapitta pacifying	Tridosha pacifying	tridosha	Kaphavata
Memory	+	+	+	+	-	-
Antistress	+	+	+	+	-	-
Immunity	+	+	+	-	+	+
Brain tonic	+	+	-	+	+	-
anticancer	+	-	-	-	-	-
Nerve tonic	+	+	+	+	+	+
Mild tranquilizer	+	+	-	-	-	-
Drug induced memory loss	+	+	-	-	-	-
depression	-	+	+	+	-	-
epilepsy	-	+	+	+	+	+
Parkinson's	+	-	-	-	-	-
insomnia	+	-	-	+	-	-
antibacterial	+	-	-	-	-	+
Venous insufficiency	-	-	+	-	-	-
Alzheimer	+	+	-	-	-	-
Noise induced problem	-	-	-	-	+	-

Discussion

In Ayurveda medhya rasayana (brain tonic), nidrajanan (sleep inducing), vedanasthapan (analgesic) Aakshepjanan (convulsive), aakshepshaman (antiepileptic) such different categories are described, and when we study these herbs pharmacologically they give dramatic results. As these herbs are used since many years so they are absolutely safe for long term use. Many conventional medicines used now a days as antidepressant, antipsychotic, nerve tonic, brain tonics, antiepileptic, Alzheimer's medicine have lots of limitations, and the situation for patients and their care giver is very delicate, because of its side effects they are always in confusion whether to continue these medicines or not. Here this is great solution for such patients. Ashwagandha, brahmi, shankhpushpi, mandukparni are very good memory enhancer and also brain and nerve tonic. Brahmi, shankhpushpi and mandukparni can be used in depression, insomnia, anxiety patients. Most important function of mandukparni is it directly reduces venous insufficiency, angiopathies in brain veins and arteries, and so because of good blood circulation we can easily take care of many progressive brain diseases. Because of some drugs itself impairment in cognition occurs which is also resolved with Ashwagandha and brahmi.

Tulsi has unique character of reducing noise stress induced biological changes and amazingly it reduces shock after electric current so this property we can use in electric workers to prevent electroshock accidents. Amla is good antioxidant, anti-aging, herb so reduces age related cognition deficit, also it is good antidote for nicotine induced convulsions. These herbs also act as a vishaghna means reduces side effects of conventional medicines, so if needed we can use them with modern medicines also.

Conclusion

Traditional Indian herbs has key role in treating serious brain disorders. Ashwagandha, brahmi, these two herbs has vast area of repair and nourishing for brain and nerves and can be used effectively in anxiety, depression, and also diseases like epilepsy, alzheimers. Mandukparni has good result in venous insufficiency. Shankhapushpi and all these 5 herbs are good memory enhancer. This study is specifically based on literature review and web magazine study, so further clinical study is necessary to confirm the definite result, to give confidence of using single drug therapy in every patient in vast scale.

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