Parkinson's Disease (Kampavata): Understanding the Ayurvedic Approach

Introduction

Parkinson's disease, known in Ayurveda[i] [1] as "Kampa Vata," is a neurological disorder affecting 1% of the population over age 65 and is the fourth most common neurological degenerative disorder found in the elderly (1). Because this condition occurs more frequently in industrialized countries, some have speculated that this condition may be caused by environmental toxins (2). However, earlier references to this condition preceding industrialization are numerous. Western medical literature from the famous physician Galen, dating back to around 175 AD, gave one of the first descriptions of this condition under the name "Shaking Palsy." In 1817 the physician James Parkinson published a very detailed description of the condition and thus, as the tradition in the West, the disease was named after him (7). Direct reference to the Parkinson's disease in the ancient ayurvedic literature is sparse and refers only to related symptoms including tremors. Thus, the condition is referred to in the modern ayurvedic literature by various names for tremors: Kampavata (tremors due to vata), vepathu (shaking, as in being off track or out of alignment), prevepana (excessive shaking), sirakampa (head tremor), spandin (quivering), and kampana (tremors) (4,5,6,8). Parkinson's disease is most commonly called Kampavata.

Ayurvedic Etiology and Pathology (Nidana and Samprapti)

As we age, particularly into our later years, apana vayu accumulates (sanchaya) and may become aggravated (prakopa). This leads to the constipation so commonly seen in the elderly. When this is combined with a vata increasing lifestyle and constitutional tendencies, the stage is set for vata to overflow (prasara) into circulation. Overflow causes vyana vayu to become disturbed within the rasa dhatu. Systemic signs of vata disturbance occur, such as dryness of the membranes of the body. Vata may relocate (sthana samsraya) to any dhatus that are weak. When a preexisting weakness resides in the tissue of the brain, this becomes the site of relocation and thus we have a condition of vata (prana, samana and vyana) in the majja dhatu, damaging portions of the brain stem and causing altered coordination and tremors. Additional components of the pathology which are commonly present include vata (vyana) entering mamsa dhatu causing muscle rigidty and prana kshaya (diminished prana) in the manovaha srota causing depression. In addition, kapha appears to be diminished in the majja dhatu in these patients. An increase in vata dries out kapha (cellular structure) in the susceptible region of the majj dhatu (brain stem). This creates an open space inviting vata to become vitiated. While the condition has a predominantly vata pathology, pitta can also play an important role in the samprapti (pathology) as its heat can burn out the celluar structure causing kapha kshaya (diminished kapha) in the majja dhatu, creating the original weakness in the brain stem. Hence personalities based in fear (vata) and intensity (pitta) are most predisposed to this condition and those of kapha nature are the most naturally protected.

Medical Pathology

Medical research has determined the cause of the condition to be a loss of function of specialized cells in the brain stem which stimulate the production of the neurotransmitter, dopamine (9,1). The cause of the functional disturbance is not known. It is known that Parkinson's disease can occur secondarily to several known causes including the ingestion of anti-psychotic drugs such as reserpine. (Reserpine is a plant alkaloid derivative of the Indian herb Sarpagandha or Rauwolfia Serpentina (8).) These drugs block the action of dopamine on the brain even though normal levels are present. In addition, carbon monoxide and maganese poisoning can instigate the condition as well as other brain tissue abnormalities such as tumors and infarcts. Finally, drug abusers injecting N-MPTP or Meperidine (1-menthyl-4-phenyl-1,2,5,6-tetra hydropyridine (1,3,7).), can cause a form of the disease which has a sudden onset and is irreversible.

Signs and Symptoms (Rupa and Laksana)

The most common recognizable symptom of Parkinson's disease is known as a "pill rolling tremor." In this condition, the thumb and fingers move uncontrollably in a manner resembling the rolling of a pill between the fingers. Tremors most commonly appear in the hands, arms and legs, though other areas may be affected. Small movements of the hands and fingers may eventually be difficult. This condition called micrographia, can make ordinary daily activities such as buttoning a shirt very difficult. Another symptom is stambha (rigidity), in which movement becomes slow and difficult to initiate. Patients usually have to look at their feet to begin, shuffle forward to and occasionally, inadvertently break into a trot (festination). The arms do not swing in coordination with the usual stride. The face may appear without expression (mask face), dull or depressed, though no depression may be present. Reduced blinking is an early symptom. The voice becomes monotone and expressionless, further causing some to mistake this as depression. Fifty percent of patients will develop dementia- (1)Vishada (depression), can accompany the disease but the symptoms of mask face and monotone voice occur as a part of Parkinson's disease and should not be confused with depression. Upon examination, passive movements of the limbs, produces what is commonly called, "cogwheel rigidity." This is an unconscious resistance to passive motion causing the limb to move with irregular starts and stops or a ratchet type motion. Sensory examination and reflexes are usually normal. Other signs of autonomic nervous system dysfunction may or may not be present, including orthostatic hypotension, constipation and urinary hesitancy (1,9). The most common signs and symptoms of Parkinsons Disease * Tremors * Muscular Rigity * Mask Face/Staring * Festinating Gait

Nidanam (Diagnosis)

Diagnosis is based primarily on signs and symptoms. Resting tremors (tremors which occur when the body is at rest and there is no voluntary initiation of motion) along with rigidity, loss of facial expression or gait abnormalities strongly suggests the disease. As only 70% of patients exhibit tremors, the other 30% of the cases are more difficult to diagnose (1). This condition may be confused with other causes of tremors, depression and gait abnormalities.

Western Medical Treatment

Drugs supplying the brain with L -dopa have been the mainstay of allopathic Parkinson's treatments (1,9). The strongest effects of this chemical are seen in the reduction of gait abnormalities and rigidity (1). Additional drugs are given to prevent the catabolism (breakdown) of dopamine. L-dopa is often administered in combination with other drugs (1). Surgery to alter brain function and the use of fetal dopamine neurontransplantation are under study (1).

Ayurvedic Treatment (Chikitsa)

Ayurvedic treatment for this condition centers around the treatment of vata disturbance. Oleation and fomentation form the basis of the constitutional treatment (4). Oleation through massage (abhyanga[i] [2]) and enema (basti[i] [3]) are indicated as well as the ingestion of oils. Naturally, jathargni must be strong enough to support such as a heavy regiman. If the patient exhibits significant ama and is strong enough, gentle purification procedures should be administered first. Oils medicated with ashwagandha (withania somnifera) and bala (sida cordifolia) are commonly used to pacify vata and build ojas. They are known to be rejuvenative with a strong nourishing action on the nervous system. The herb atmagupta (Mucuna Pruriens - also known as Kappikacchu) has received a lot of attention historically and again in recent years. A study in 1978, published in the journal, Neurology (india), showed its effectiveness on 23 patients diagnosed with Parkinson's disease. This study used only the powdered seed of the plant. In 1990, Manyam published the results of his study in the Journal Movement Disorders in which he found that Mucuna Pruriens contains Levodopamine or L -dopa within its seeds. This confirmed the 1937 study by Damodaram and Ramaswamy published in the journal, Biochemistry (8,10). L-dopa is the precursor of dopamine, the neurotransmitter which is absent or decreased in Parkinson's disease. The findings of these studies were confirmed at the Southern Illinois University, School of Medicine published research which was performed in the

department of biology at the University of Groningen, the Netherlands. A controlled trial using a derivative Mucuna Pruriens called HP 200 was found to be effective in treating Parkinson's disease. Ayurveda teaches that a holistic treatment regimen offers the greatest chance of success with Parkinson's patients. In addition to using Mucuna Pruiens (V-PK ++, sweet/bitter/cool/sweet), vata must be pacified at its site of origin in the colon, site of overflow in the rasa dhatu and at its site of relocation in the majja dhatu. Apana vayu disturbance may be treated with moist laxatives such as psyllium (Plantago Psyllium), flaxseed (Linum Usitatissimum), or the traditional formula, triphala. Vyana vayu in the rasa dhatu may be treated with demulcents, such as slippery elm (Ulmus fulva) or licorice (Glycyrrhiza Glabra). And, prana vayu in the majja dhatu may be treated with kappikacchu (Mucuna Pruriens, along with supportive herbs such as ashwagandha (Withania Somnifera). If vata has also entered the mamsa dhatu causing rigidity, herbs which are muscle relaxers and nervine sedatives may be of value. Jatamansi (Nardostachys Jatamansi) and Shank Pushpi (Canscora Dicussata) may be used. If vata has entered the manovaha srota and depression is present, Gotu Kola (Hydrocotyle Asiatica) and Saint John's Wort (Hypericum Perforatum) are examples of herbs which can be added to formulas or used separately. A vata pacifying diet and proper dietary habits are essential to long term success. Additional vata pacifying regimens including daily oil massage (applied by the patient or practitioner) and sensory therapies complete the treatment regimen. Finally, a supportive environment should be created which is not overly stimulating. Meditation and yogic practices are the cornerstone of all holistic ayurvedic programs, as they cultivate a sattvic mind and teach the patient how to manage their internal energies. This is essential for good health. When pitta is vitiated in addition to the primary vata disturbance, care should be taken that treatment and lifestyle do not overheat the mind or body. Herbs such as Gotu Kola (VPK-, bitter-cool-sweet) which are cool and tonify the mind and nervous system may be added to any formula and are essential if there is a distrubance of sadhaka pitta (symptoms of sadhaka pitta vitiation: Anger, overly critical, intense). Another good herb to add to the formula for a pitta-vitiated individual is Gaducci (Tinospora Cordifolia), and excellent bitter, nervine tonic and pitta rasayana.

Side Effects of Treatment

According to the Materia Medica of the Hindus, patients treated with Kappikacchu (Mucuna Pruriens) have shown mild side effects which include headache, dystonia (abnormal muscle tone), fatigue, tremors, syncope (fainting) and thirst (8,11). Allopathic administration of L-dopamine can cause abnormal movements of the face (tardive dyskinesia) and limbs (chorea) as well as abnormal muscle tone (dystonia) (1). Unfortunately, the drug appears to decrease in effectiveness over time. Some experts believe that taking L-dopa early in the disease increases the overall progression of the condition and choose to only use the drug later in its course (1). Other drugs include amantadine, which improves symptoms in 50% of patients though it is unclear how it works and may caused edema, confusion and liver reticularis. Bromocriptine and pergolide are additional drugs used. Ergot alkaloids may also be used; these activate dopamine receptors causing less dopamine to be more effective. Side effects of this drug include confusion, delirium and psychosis, among others. Additional drugs may be used such as selegiline, propranol, and anticholinergic drugs. These are used either alone or with L-dopa. They all cause a host of side effects and effectiveness is limited.

Discussion

Ayurvedic regimens have a lot to offer patients with Parkinson's disease. While the pharmocological actions of specific herbs such as Atmagupta (Mucuna Pruriens) are being found useful, complete treatment requires proper lifestyle and daily regiments which pacify the patients vikruti (imbalance) and in the long term, those which are in harmony with the patients constitution. Following a yogic model, patients should be encouraged to look within to discover the underlying psychological and spiritual components contributing to their condition. Since disease is the end result of living out of harmony with one's constitution, understanding where a person is out of o harmony on the physical, emotional and spiritual levels is the cornerstone of Ayurvedic and Yogic healing and the healing of our consciousness. With this understanding, a person can take the actions necessary to bring about harmony and healing. Ayurvedic philosophy teaches us that the harmonious individual with a purely sattvic nature, does not experience disease. Likewise, one who is sick, who cultivates a sattvic mind, brings rapid healing to their body. Hence, all patients should be encouraged to reduce stress and cultivate practices such as meditation, which bring about peace of mind. Future Western scientific exploration of Ayurvedic healing will have to go beyond the pharmocological actions of various

herbs, and explore, the effects of ayurvedic lifestyles, regimens and Yogic practices applied as part of a treatment regimen in addition to herbs. While Mucuna Pruriens has a predictable allopathic effect which is easy to measure, outcome studies can be designed to look at complete treatment programs and not simply individual components. The effectiveness of ayurvedic treatment goes beyond the pharmocological and incorporates the behavioral, and ultimately depends upon the internal and subtle energies of our being. While these aspects are hard to isolate and scrutinize, they can be evaluated as a whole, and it is here that genuine ayurvedic research begins.

References

1. The Merck Manual, Seventeenth Edition, Merck Research Laboratories. 2. The role of environmental toxins in the etiology of Parkinson's Disease. Tanner, CM. TINS 1989; 12:49-54 3. Langston JW, Ballard P, Tetrud JW, Irvin I. Chronic Parkinsonism in humans due to a predouce of Meperidine. Analog synthesis. Science 1984; 219; 979-980 4. Caraka Samhita Vol. 1-4, Bhagwan Dash and R.K. Sharma, Chowkhumba Sanskrit Series, Varanasi, (General Reference used for concepts, not specific information) 5. Ashtanga Samgraha of Vagbhata Vol., 1-3 K.R. Srikantha Murthy, Chaukumbha Orientalia, Varanasi 1997 (General Reference used for concepts, not specific information.) 6. Madava Nidanam 7. Treatment of Parkinson's disease in Ayurveda: Journal of Royal Society of Medicine; M Gourie-Devi, M G Ramu and B S Venkatarum. Department of Neurology and Ayurvedic Research Unit, National Institute of Medical health and Neuroscience's, Bangalore, India. 1991 Page 491-492. 8. Paralysis Agitans and Levodopa in Ayurveda: Ancient Indian Medical Treatise, Bala V. Manyam, Division of Neurology, Southern Illinois University School of Medicine, Springfield, Illinois. Movement disorders Vol. 5, No. 1, 1990. Page 47-48. 9. Principles of Internal Medicine: Harrison 10. Damodaran M, Ramaswamy R. Isolation of L-dopa from the seeds of Mucuna Pruriens. Biochemistry 1937;31:2149-51 11. Dutt VC. Materia Medica of Hindus. Varanasi: Chowkumbha Saraswalibhawan, 1980: 148-149 12. Treatment of Parkinson's Disease of Cowhage plant - mucuna pruriens. Vaidya AB, Rajagopalan, TG, Mankodi NA, Antakar DS, Tathed PS, Purohit AV, Wadia NH, Neurology (India) 1978; 171-6 13. Indian Materia Medica, A.K. Nadkarni, K.M. Nadkarni, Popular Prakashan 1976

Source URL: http://ayurvedacollege.com/articles/drhalpern/clinical/Parkinson

Links:
[1] http://ayurvedacollege.com/glossary/term/10
[2] http://ayurvedacollege.com/glossary/term/2
[3] http://ayurvedacollege.com/glossary/term/8