PD Expert Briefing:
Complementary Approaches to Parkinson’s Disease

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Welcoming Remarks

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Complementary Approaches to Parkinson’s Disease

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Complementary Medicine May…

- Provide treatment options that complement traditional therapies
- Improve quality of life for some people with Parkinson's.
Complementary Medicine Can Not ...

- Replace traditional therapies for the long term treatment of PD.
- Provide a cure.
Most CAM modalities have not been studied adequately

- Funding is very limited
- Patients may not know about study options
- Look for clinical trials in your area on:
  - www.pdtrials.org
  - www.clinicaltrials.gov
Participation in all kinds of clinical trials is very important!

- Helps us learn about PD
- Gets new drugs on the market more quickly
- Validates treatments such as CAM therapies
- Gives patients a role in determining what future treatment options are available
Complementary/Alternative vs. “Traditional” or Western Medicine

- Many of the modalities in Complementary Medicine are centuries old…which is “traditional”?
- “Western” medicine has many advantages but also many limitations.
- These are not two distinct categories.
Why Doctors May Be Reluctant To Embrace Complementary Medicine

- Lack of scientific data.
- Concern for patient safety.
- Lack of familiarity and training.
- Control issues?
- Legal issues.
Why People With Parkinson's May Try Complementary Medicine

- Lack of satisfaction with “Traditional” options.
- Barriers (cost, language, cultural) to other types of care.
- Cultural influence promotes other options.
- Other factors (affluence, education, environment).
Types of Complementary Medicines

- Ayurveda
- Traditional Chinese Medicine.
- Herbal Medicine.
- Neutraceuticals.
- Antioxidants.
Other Complementary Therapies

- Acupuncture
- Massage.
- Tai Chi.
- Yoga.
- Pilates.
- Reiki.
Complementary Medicine Use in PD

- In USA, 40% of people with Parkinson's use some form of alternative therapy compared with about 33% of non-PD adults (PD n=201).
- Vitamins, herbs, massage, acupuncture were most common.

Rajendran et al 2001
Complementary Medicine Use in PD

- In the UK, 54% of people with Parkinson's use some form of alternative therapy (PD n=80).
- 38.4% used AT to treat the PD.
- Massage, aromatherapy were most common.

Ferry et al 2002
Which PD Patients Try CAM?

- USA study---Younger age and young age at onset, higher income and education were associated with greater use of alternative therapies. Gender, race disease severity were not correlated. (92 % white/8% nonwhite).

  Rajendran et al 2001
Which PD Patients Try CAM?

- UK study---Younger age at onset, younger age in general were most significant factors. Gender, number of comorbid diseases was not significant. Insufficient ethnic groups in sample to allow comment.

  Ferry et al 2002
Antioxidants in PD

- Free radicals are highly reactive particles than can damage cells by injuring DNA, mitochondria and cell membranes.
- An antioxidant is a substance that can neutralize free radicals, thus preventing damage to cells.
Antioxidants in PD

- As there is evidence that free radicals play some role in neuronal death in PD, attempts have been made to study antioxidants as possible disease-modifying agents in this disease.
Antioxidants in PD

- Vitamin E was studied as part of the Datatop study in the 1980s and was not shown to be disease-modifying.
- It is possible that this was related to the type of Vitamin E that was used or other factors related to study design.
Antioxidants in PD: Co-enzyme Q10

- Coenzyme Q10, another antioxidant, created interest as a possible disease-modifying agent in PD.
- In a small study, Coenzyme Q10 seemed to slow the decline in mental and motor function at doses of 1200 mg/day.
- Unfortunately, a larger study using 2400 mg/day was recently stopped due to lack of efficacy.
Antioxidants in PD: Creatine

- Creatine, another antioxidant that also may protect mitochondria, being studied as a possible disease-modifying agent in PD.
- Part of NET-PD study.
- Double-blind placebo-controlled study looking at delay of disability.
- Five-plus years, 1700 people with Parkinson's.
Antioxidants in PD Considerations

- Limits of studies and lack of blanket recommendations for people with Parkinson's.
- Dosage issues; apparent lack of benefit at lower doses.
- Cost issues, suggest lower-cost options (internet, warehouse stores).
- Waiting for study results is one option.
Caffeine

- A pharmaceutical.
- Has Adenosine agonist activity.
- May have neuroprotective activity.
- New evidence that this may depend on genetic makeup of individual.
Glutathione

- Reduced in the brains of people with Parkinson's.
- Molecule does not cross blood-brain barrier.
- Recent study by Hauser et al did not demonstrate significant benefit in PD patients.
Vitamin D and PD

- Vitamin D receptors are present in large numbers in the substantia nigra.
- Low vitamin D often found in people with PD.
- Inadequate Vitamin D levels may make dopamine cells more susceptible to damage from toxins or drugs.
Tobacco and PD

- More than 50 studies have shown lower risk of PD in people who smoke.
- This has resulted in study of nicotine as possible disease-modifying agent.
- Tobacco smoke contains hundreds of different substances.
- Future studies may use tobacco or derivatives.
Uric acid and PD

- Elevated blood levels of uric acid are associated with lower risk of PD.
- Inosine and uric acid have antioxidant properties.
- Inosine, a uric acid metabolite, is being studied as possible disease-modifying agent.
Tai Chi in Parkinson’s Disease

- Tai Chi is part of a Chinese system of healing known as Quigong.
- Tai Chi is both a martial art and a type of meditation.
- Practitioners follow an instructor in performing a series of choreographed movements.
Tai Chi in Parkinson’s Disease

- Tai Chi has been demonstrated to improve balance and decrease risk of falls in older adults in several studies.

  Li et al, 2005, Chen et al, 2005, Choi et al, 2005
Tai Chi in Parkinson’s Disease

- In Parkinson’s disease, a group of 30 IPD patients (H & Y stages I.5 to III) were randomized to Tai Chi vs. control group.
- The Tai Chi group received 2 classes per week for 12 weeks.
- Analysis of UPDRS motor score and fall frequency demonstrated improvements in the Tai Chi group.

Marjama-Lyons et al 2002
Tai Chi in Parkinson’s Disease Considerations

- Find a well-trained instructor and discuss health issues prior to starting class.
- Find class at appropriate level; if not PD, arthritis or other ‘senior-oriented’ class.
- May need modified or ‘seated Tai Chi.’
Massage in PD

- Many different types of massage, including Shiatsu/acupressure, Swedish, Neuromuscular Therapy (NMT).
- NMT was shown to improve UPDRS motor score, CGI scores compared with music relaxation control group.

Svircev et al. 2005
Massage in PD
Considerations

- Try different styles to find one they prefer.
- Look for Licensed Massage Therapist or a Physical Therapist with training in massage therapy.
- Reimbursement will depend on setting.
Yoga in PD

- No studies yet in Western literature in PD.
- Benefit has been demonstrated in other conditions such as asthma, blood pressure, digestion.
- Has been demonstrated to help improve balance.

Dhume 1991
Yoga in PD
Considerations

- Look for classes at local senior centers, park districts.
- Find a teacher who is comfortable with students at beginning level and students with physical limitations … discuss these prior to first class.
- Start slowly … listen to your body!
Traditional Chinese Medicine (TCM) in PD

- TCM has been practiced for thousands of years.
- Concerned with maintaining the balance of health, not just treating disease.
- Concern is to maintain balance between opposite elements within the body; the ‘yin’ and the ‘yang’.
Traditional Chinese Medicine (TCM) in PD

- The ‘yin’ refers to the organ, the ‘yang’ refers to its activity. Disease results from a disturbance in this balance.

Janhke, Alt. Med. 2nd ed.
There is a description from a textbook written in 1565 of a condition similar to PD. This is thought to be due to an imbalance between the Liver (yin) which rules coordination and smooth movement and the Wind (yang) resulting in tremor.

Principles of Medicine 1565
Traditional Chinese Medicine (TCM) in PD

- Recommended treatment would focus on correcting this imbalance.
- Treatment modalities might include acupuncture, Tai Chi, herbal medicines.
Traditional Chinese Medicine (TCM) in PD Considerations

- Find practitioner with appropriate credentials
- These may vary by stat.
- Often it will be the NCCAOM (National Certification Commission for Acupuncture and Oriental Medicine).
Ayurveda in PD

- One of the oldest systems of medicine in the world.
- Concerned with establishing and maintaining harmony of body, mind and spirit more than treatment of specific diseases.
- However, some practitioners use the principles to treat disease.
Ayurveda in PD

- The practitioner determines the metabolic type of the patient, then assesses various pulse points and their relationship to internal organs.
- Detoxification is done by various cleansing techniques, then balance is restored with yoga and meditation.
Ayurveda in PD
Mucuna pruriens

- Mucuna pruriens is a legume from which a levodopa-like substance can be derived.
- It was used centuries ago to treat a condition that most likely was PD.
- Tests done recently to assess the benefit of this therapy in PD have suggested that it may have some advantages over synthetic levodopa.

Katzenshlager et al 2004
Ayurveda in PD
Considerations:

- There is not a licensing board for Ayurveda.
- Try finding a well-trained Complementary medicine practitioner; he or she may have some training in Ayurveda or may be able to refer to a qualified practitioner.
Acupuncture in PD

- People with Parkinson's describe improvements in pain, stiffness, dyskinesias ... tends to wear off after a few days.

- Small studies have not shown measurable benefit in UPDRS, depression scales, etc.

  Shulman 2002, Cristian 2005
Acupuncture in PD
Considerations:

- Have realistic expectations of therapy: possible partial, temporary relief of some PD symptoms.

- Find a practitioner licensed by the National Certification commission for Acupuncture and Oriental Medicine (NCCAOOM).
Diet as ‘CAM’

- While there are few studies of nutrition and PD, good nutrition is important for overall health and well-being.
The Mediterranean Diet

- Olive oil.
- Fruits and vegetables.
- Fish.
- Red wine.
Antioxidants

- Vitamin C.
- Vitamin A.
- Vitamin E.
- Selenium.
- Lycopene.
- Polyphenols.
Fruit and Vegetables

● Loaded with antioxidants.
● Antioxidants prevent free radical damage to cells.
● We lose antioxidants as we age.
● Aim for 9 servings a day.
● Especially green leafy types such as kale and spinach.
● Blueberries and strawberries: go for color!
Olive Oil

- High in phenols which are powerful antioxidants.
- Aim for 2-3 tablespoons per day.
- Extra-virgin goes through less refining and processing and thus retains more nutrients.
Spices

- **Turmeric**- antioxidant, anti-inflammatory, cholesterol-lowering properties.
- Contains **Curcumin**- may be good for memory.
- **Cinnamon**- May boost memory.
- **Rosemary**- prevents breakdown of acetylcholine, so may help memory.
- **Peppermint**- May help lower GI complaints.
- **Ginger**- May relieve nausea.
Exercise as ‘CAM’

- Exercise is proving to be a mainstay of PD treatment.
- For my patients, it is not ‘Alternative’ but mandatory!
Sleep as ‘CAM’

- Good sleep benefits all PD symptoms.
- Working with your doctor to diagnose and treat all aspects of sleep may do your PD symptoms more good than any other CAM therapy.
Finding A CAM Practitioner

• A good resource is www.integratedmedicine.arizona.edu/index/alum.html

• Most CM practitioners will have limited experience with PD. Best results will be obtained if PD specialist and CAM specialist work together.
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