

PARKINSON'S DISEASE

The integrated approach to the treatment of patients with Parkinson's Disease is based on the work of Dr Geoffrey Leader MB ChB FRCA and Lucille Leader Dip ION. Their book 'Parkinson's Disease The Way Forward' is available from Denor Press (denor@dial.pipex.com).

Parkinsonism is a syndrome of tremor, rigidity, bradykinesia and difficulty in stopping and starting walking. Parkinson's Disease is one cause of Parkinsonism – due to degeneration of Substantia Nigra dopaminergic neurons in the brain. Diagnosis is essentially a clinical one and is based on the natural history of the disease and the patient's clinical symptoms. Parkinson's Disease has an overall prevalence of about 1/1000 of the general population, but it is more common in the elderly. The onset of the disease is usually after the age of 50 years, the incidence increasing with advancing age.

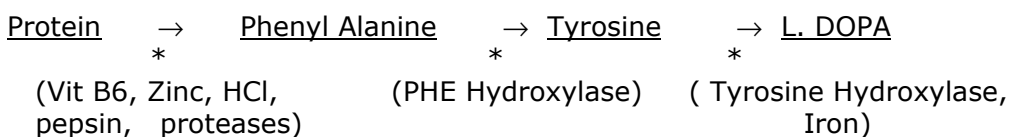
The cause of Parkinson's Disease remains largely unknown. Genetic factors may be implicated in some cases. There is no good evidence for a viral mechanism. The discovery that methyl-phenyl-tetrahydropyridine (MPTP) caused severe Parkinsonism in drug addicts has provoked the theory that the idiopathic disease might be due to an environmental toxin. There is some evidence to suggest that Parkinsonism is more common in country areas frequently sprayed with herbicides, some of which (eg Paraquat) have chemical similarity to MPTP. Other causes of Parkinsonism include: atypical neurodegenerative syndrome (primary), atherosclerosis, repeated head injury and post-encephalitis.

Parkinson's Disease most commonly develops gradually and asymmetrically with the upper extremities affected first. The cardinal signs are as follows:

- tremor at rest
- bradykinesia (slowness of initiation of voluntary movement)
- rigidity (muscular stiffness)
- postural instability

These symptoms may be preceded by non-specific disorders such as fatigue, myalgia, loss of sense of smell, depression, constipation and sweating abnormalities.

Dopamine is synthesized, by a series of conversions, from specific amino acids taken in in the diet:



→ Dopamine

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(Vit B6,
DOPA decarboxylase)

→ Noradrenaline

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(Copper, Vit C,
Dopamine B Hydroxylase)

→ Adrenaline

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(Phenylethanolamine N-
Methyl Transferase)

The conventional treatment of Parkinson's Disease involves the use of several different classes of drugs – of which probably the most important is L-Dopa (Sinemet, Madopar). This is a precursor of dopamine which is converted into dopamine in the body. Most patients will usually end up on this drug, perhaps after other drugs such as dopamine Agonists or Selegiline have been tried. Although proven to improve symptoms and quality of life, these drugs can cause a number of side effects including fading effects and motor fluctuations, dystonias, orthostatic hypotension, nausea and vomiting and neuropsychiatric effects such as cognitive impairment, agitation, depression, delirium, hallucinations and sleep disorders.

An Integrated Approach to Parkinson's Disease includes pharmacological drugs, but in carefully worked out doses and in combination with a range of other approaches aimed at optimizing function. These include dietary advice and nutritional treatments, both to correct deficiencies and support organ function, detoxification treatments, physiotherapy, remedial exercise, osteopathy, speech therapy, neurorehabilitative education and training, and counselling/psychotherapy.

A treatment plan for a patient involves:

- 1) An assessment of current medication, including dosage and timing of dosage, and the relation of these to symptom control. Patients are advised on how to keep a diary scheme to facilitate this process.
- 2) Dietary advice.
 - The key point is that the patient's diet needs to be structured in order to optimize both nutrient intake and the potential benefit of their medication. Protein-rich food is required for the synthesis of dopamine, but there is competition for the absorption sites in the proximal small bowel, as well as competition for active transport across the blood-brain barrier between most of the neutral amino acids
 - and drugs containing L-Dopa. This medication should therefore be taken away from protein-containing meals.
 - The identification of any food allergy/intolerance should also be made because if undiagnosed, this may be exacerbating symptoms.
 - Various dietary factors may additionally be confounding the problem by way of the negative effects they produce eg food additives, Monosodium Glutamate and Aspartame (excitotoxins), pesticide residues on foods etc.
 - Hypoglycaemia should be avoided,
 - A nutrient-rich diet generally should be consumed, and supplemented if necessary.
- 3) Biochemical and Nutritional tests – to identify any contributing factors or concomitant problems which can be remedied.

- 4) Oral nutritional supplementation to address deficiencies, facilitate detoxification and support organ functioning.
- 5) Intravenous nutritional and antioxidant programs may also be recommended, including chelation therapy.
- 6) Advice about referral to other appropriate Therapists eg for remedial exercise, osteopathy, counselling, speech therapy etc.

Patients' Neurologists and GPs will be advised about all treatment undertaken at the Dove Clinic.

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