#### **Treatment**

# Control and Relieve the Symptoms, Enhance the Physical Ability

- medication (a number of medicine can effectively improve the symptoms and doctors will select the most appropriate combination according to the patients' conditions and needs)
- surgical treatment (Deep Brain Stimulation)
  - reserved for patients who have poor response to medication in the later stage

### Points to Note in Daily Life

- · Maintain regular exercise to improve limbs
- Flexibility and body balance
- Increase intake of high-fibre food to prevent constipation
- Adjust routine of daily activities based on response to medicines
- Enhance self-care ability by undergoing physiotherapy and occupational therapy, and using appropriate assisting devices
- Avoid walking too fast, stopping or changing direction suddenly in order to prevent falls



### **HKSH Neurology Centre**

#### **Happy Valley**

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Closed on Sundays and Public Holidays

Consultation by Appointment





# Parkinson's Disease



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### What is Parkinson's Disease?

Parkinson's disease (PD) is a chronic and progressive neurological disease. It was named after the British doctor Dr. James Parkinson who first described the disease in a medical journal in 1817. PD is due to degeneration in a part of the brain stem called "substantia nigra", resulting in insufficient production of "dopamine", which is a chemical responsible for transmitting signals in the nervous system. The decrease in the amount of "dopamine" in the brain directly affects the control of motor activities, leading to limb stiffness and slowness of movements of the patients.

# Differences between PD and Alzheimer's Disease

PD is primarily a movement disorder that affects the physical abilities of the patients. Most of them will not have memory and cognitive problems. However, a proportion of patients may eventually experience impairment in cognitive functions in the later stages of PD. On the other hand, Alzheimer's disease primarily results in impairment of memory and deterioration in intellect. Motor function is not impaired until its late stages.

### Causes

- Less than 5% of cases are due to inherited.
- The cause is unknown in the majority
- Secondary causes
  - Side effects of medicines such as those used for treatment of vertigo or psychiatric conditions
  - Cerebrovascular diseases
  - Brain tumours
  - Hydrocephalus
  - Carbon monoxide poisoning or heavy metal toxicity, such as manganese
  - Brain injury

# **Symptoms**

# **Early Stage**

- · Tremor, especially occuring at rest
- · Stiffness of limbs
- · Sluggish movements
- Walking instability
  - Difficulty in starting or stopping
  - Decrease in swing of the upper limbs while walking
- Difficulty in handwriting with the written characters becoming smaller and smaller
- · Lack of facial expression
- · Monotonous and soft voice
- Constipation

### Intermediate Stage

- Symptoms spread from one side to both sides of the body
- "On-off" phenomenon due to fluctuating medication efficacy deterioration in walking, such as dragging the feet along the ground, shuffling forward in short steps, difficulty in starting and turning
- Tendency to lean forward, lose balance and fall easily



### **Later Stage**

- The medications become less effective and the patients become immobile during the "off" phase, with other symptoms such as pain and sweating
- · Walking problems become more pronounced
- · Speech becomes indistinct
- · Swallowing difficulty
- Constipation
- Sexual and other autonomic nervous system dysfunction
- · Loss of self-care ability
- · Cognitive impairment
- Mental confusion, resulting in illusion and delusion

### Diagnosis

- · Diagnosis is based on clinical assessment
- Blood test and brain scan are used mainly for ruling out secondary causes of PD
- Positron Emission Tomography making use of a specific Radioisotope Tracer. This service is available only at Hong Kong Sanatorium & Hospital, and may be considered for PD patients with atypical presentation



Parkinson's Disease

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