

# MDS Clinical Diagnostic Criteria for Parkinson's Disease

Part 2

# Diagnostic Criteria For PD

# Diagnosis of clinically “ESTABLISHED” PD

- At least 2 supportive criteria
- Absence of absolute exclusion criteria
- No red flags

# Diagnosis of clinically “PROBABLE” PD

- Numbers of supportive criteria = red flags  
(but no more than 2 red flags)
- Absence of absolute exclusion criteria

# Supportive Criteria

# 1.

- Clear and dramatic beneficial response to dopaminergic therapy
- *Note*
  - Initial treatment: patient retuned to normal or near-normal function
  - Marked improvement with dose increases (>30% in UPDRS III 或 subjectively with a clear history)
  - Marked on/off fluctuations + **predictable** end-of-dose wearing off
    - Can be from retrospective history (不用再特地調整藥物讓病患fluctuations)

2.

- Presence of levodopa-induced dyskinesia

# 3.

- Rest tremor of a limb
- *Note*
  - Documented in the past, or on current examination
  - Included because .....
  - **Less common** in alternate conditions
  - Rest tremor occasionally less responsive to therapy → if so, criterion 1 may be harder to meet



# 4.

- At least one ancillary diagnostic test (specificity > 80%)
- *Note*
  - Olfactory loss (anosmia by age and sex)
  - Metaiodobenzylguanidine scintigraphy → cardiac sympathetic denervation

# Absolute Exclusion Criteria

- For all other criteria with a **time** component
- Waiting until the duration before the criterion is considered as not met **is not necessary**

# 1.

- Unequivocal **cerebellar** abnormalities on examination
- *Note*
  - Cerebellar gait
  - Limb ataxia
  - Cerebellar oculomotor abnormalities (sustained gaze-evoked nystagmus, macro square wave jerks, hypermetric saccades)

## 2.

- Downward vertical supranuclear gaze palsy
- Selective slowing of downward vertical saccades

# 3.

- Diagnosis of probable **behavioral variant frontotemporal dementia** 或 **primary progressive aphasia** **within the first 5 y** of disease
- *Note*
  - Other forms of dementia are not exclusion

4.

- Parkinsonian features restricted to **lower limbs** for more than 3 y

5.

- Dopamine receptor blocker/ dopamine-depleting agent (dose and time course) consistent with **drug-induced parkinsonism**



# 6.

- Absence of observable response to **high-dose** levodopa despite at least **moderate severity of disease**
- *Note*
  - High dose of levodopa daily = **600 mg/d**
  - Moderate severity parkinsonism = **MDS-UPDRS score >2** (one measure of rigidity or bradykinesia)
  - Absence of response
    - Reported by patient (or reliable witness)
    - Sequential examinations = improvement  $\leq$  3 points on the MDS-UPDRS Part III

# 7.

- Unequivocal **cortical** sensory loss (ie, graphesthesia, stereognosis with intact primary sensory modalities), clear limb ideomotor apraxia, or progressive aphasia

# 8.

- Normal functional neuroimaging of the presynaptic dopaminergic system
- *Note*
  - **NOT** imply that dopaminergic functional imaging is required for diagnosis

# 9.

- Documentation of an alternative condition known to produce parkinsonism and plausibly connected to the patient's symptoms
- *Note*
  - Dementia with Lewy Bodies is not considered an alternative parkinsonian syndrome

# Red Flags

1.

- Rapid progression of **gait impairment** requiring regular use of **wheelchair within 5 y** of onset

## 2.

- Complete **absence of progression** of motor s/s **over 5 or more years** (unless stability is related to treatment)
- *Note*
  - Targeted at patients who may have been misdiagnosed with parkinsonism

# 3.

- Early **bulbar** dysfunction (**within the first 5 y** of disease)
  - Severe dysphonia
  - Dysarthria
  - Severe dysphagia
- *Note*
  - MDS-UPDRS: 4 for dysarthria, 3 for dysphagia



# 4.

- **Inspiratory respiratory** dysfunction
  - Diurnal or nocturnal inspiratory stridor
  - Frequent inspiratory sighs

# 5.

## ○ Severe autonomic failure in the **first 5y** of disease

### ○ **Orthostatic hypotension**

- Decrease of BP within 3 min of standing (at least 30 mm Hg SBP or 15 mm Hg DBP)
- Absence of dehydration, medication, or other diseases

### ○ **Severe urinary incontinence/ retention**

- Excluding longstanding low-volume stress incontinence (in women)
- **Must be associated with erectile dysfunction**; Not be caused by prostate disease (in men)
- Not functional incontinence

### ○ *Note*

- To identify the severe autonomic dysfunction associated with MSA

# 6.

- Recurrent ( $>1/y$ ) falls because of impaired balance **within 3 y of onset**
- *Note*
  - Be attributable to impaired balance
  - 暈厥，癲癇，正常人也會跌倒的活動不算

7.

- Disproportionate anterocollis (dystonic in nature) or contractures of hand or feet **within the first 10 y**

# 8.

- Absence of common **nonmotor** features of disease **despite 5 y disease duration**
  - Sleep dysfunction
  - Autonomic dysfunction
  - Hyposmia
  - Psychiatric dysfunction
- *Note*
  - To detect non-parkinsonian conditions mimicking PD (dystonic tremor, essential tremor)

# 9.

- Unexplained **pyramidal tract** signs
- = pyramidal weakness 或 pathologic hyperreflexia
- *Note*
  - Mild reflex asymmetry is excluded (commonly be seen in PD)
  - Isolated extensor plantar response is excluded (difficulty in differentiating from a “striatal toe”)

# 10.

- **Bilateral symmetric** parkinsonism
- Bilateral symptom onset
- No side predominance

**Conclusion**



- 要臨床確診 = 至少兩個支持條件，不能有排除條件，不能亮紅旗
- 支持條件
  - 藥物有明顯效果，或有明顯停電來電現象
  - 藥物造成的異動
  - 靜止性顫抖
  - 嗅覺測試或MIBG有發現

- 排除條件

- 中等嚴重症狀，但高劑量藥物無效
- 突觸前多巴胺功能性影像正常
- 症狀局限於下肢超過三年
- 垂直眼球運動受限
- 小腦症狀
- 五年內出現額葉顳葉失智或漸進性失語症
- 皮質症狀（皮質感覺缺損，失用，漸進失語）
- 藥物造成的的類巴金森症狀
- 有其他可能造成類巴金森症狀

+ syndrome

## ○ 紅旗

- 進展太快，五年內很快坐輪椅
- 進展太慢，五年後動作症狀沒惡化
- 一開始就是雙側性症狀
- 口咽五年內受影響
- 呼吸功能異常
- 無法解釋的錐體路徑症狀
- 十年內太過度的頸項前屈，或肢體蜷曲
- 三年內平衡不好太常跌倒
- 五年內出現自主神經異常
- 五年後沒出現非運動症狀（睡眠，自主神經，嗅覺喪失，精神症狀）