



PARKINSON SYNDROME

70% Parkinson's d.
30% Other disease

RED FLAGS

- - **MEDICATION (NEUROLEPTIC!!)**
- - positive familial history
- - early falls, postural instability
- - rapid progression
- - **nondoparesponsibility**
- - early autonomic disturbance
- - oculomotor disturbance
- - serious pseudobulbar syndrome
- - **early dementia**
- - separate leg disability
- - pyramidal or cerebellar syndrome



DIFFERENTIAL DIAGNOSIS IPD

- **A/** other NEURODEGENERATIVE Disorders
- (**PARKINSON PLUS d.**)
- - rare, nondopaminergic, rapid progression, serious prognosis
 1. Synucleinopathy (MSA, DLBD)-
intracytoplasmic inclusion alpha-synuclein
 2. Tauopathy (PSP, CBD) – intracytoplasmic
inclusion tau-protein
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- **B/** Other **NEUROLOGIC** Disorders
- HD Westphal variant - familial
- (Wilson's disease)
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- **C/ SECONDARY** parkinson syndrome
- Side effects of drug, vascular, NPH



DRUG INDUCED FARMAKOLOGIC ANAMNESIS

- **TYPICAL** NEUROLEPTIC !!
- Haloperidol, Chlorpromazin, Chlorprotixen, Tisercin
- TREATMENT: Akineton

- ANTIEMETIC, PROKINETIC
- Cerucal, Degan, Torecan

- ANTIHISTAMINIC
- Prothazin

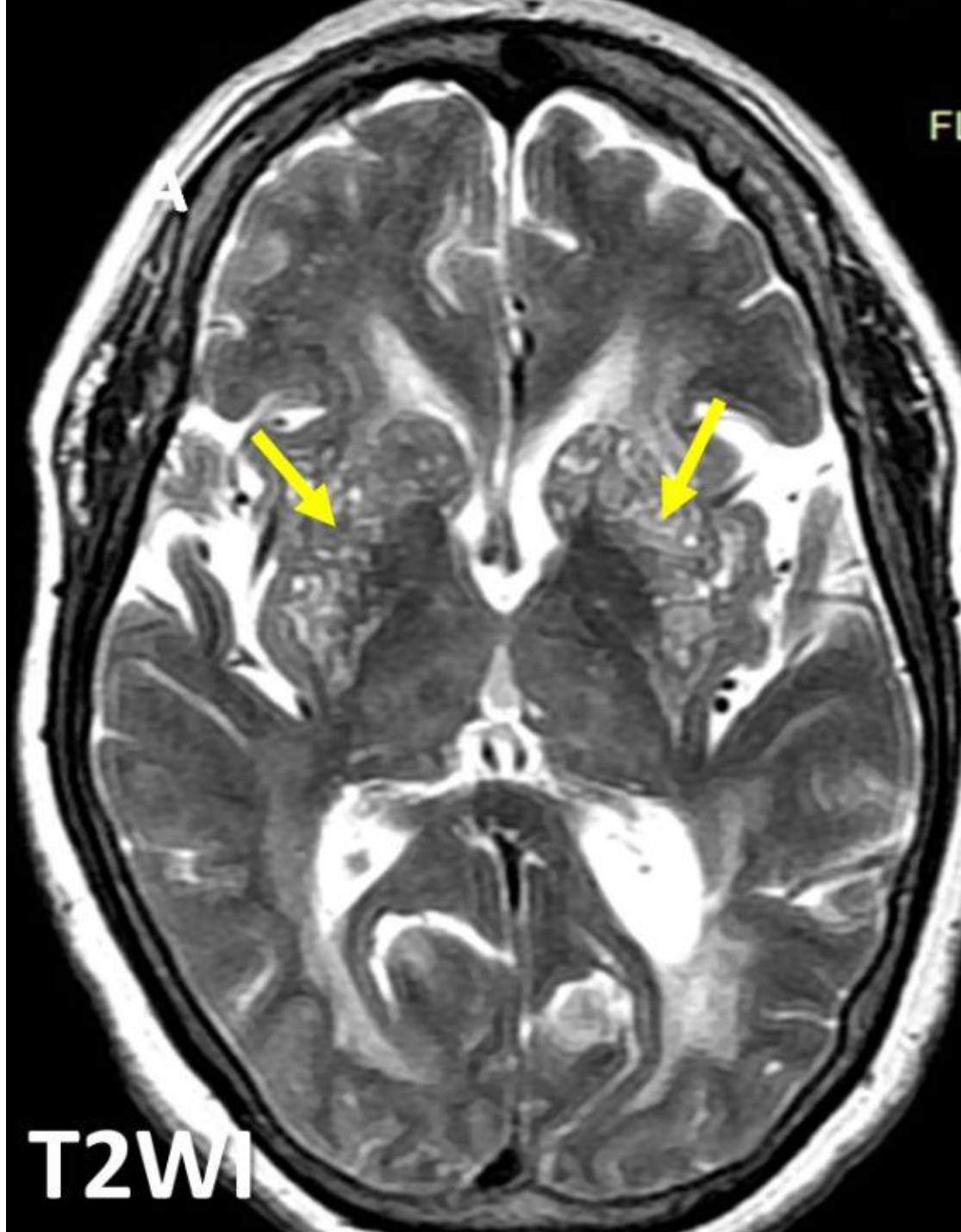
- BLOCK of Calcium channels
- cinarizin, flunarizin



VASCULAR

- OFTEN
- MRI finding: multiinfarct changes - **status lacunaris**
- - development gradually or as a stroke
- - Pa sy UNILATERAL during the first year after stroke after stadium of hemiparesis
- - Pa sy BILATERAL (frontal **only gait** disturbance
- **LOWER BODY parkinsonismus**
- other signs: pseudobulbar palsy, dementia, incontinency
- - rapid progression
- - TREATMENT : low effect of amantadin
- NO! L-Dopa because of postsynaptic DA receptors lesion

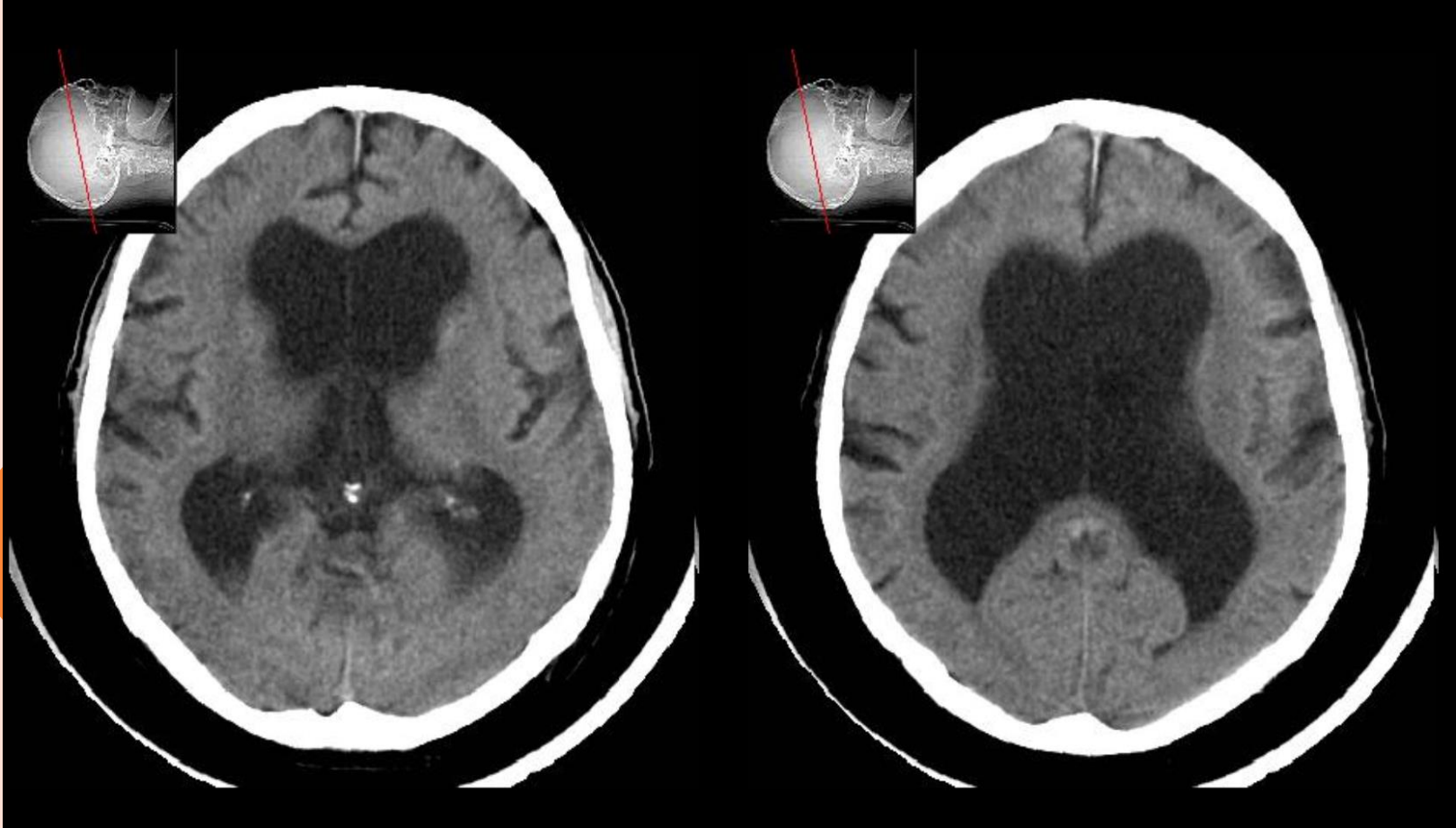




NORMOPRESSURE HYDROCEPHALUS

- Disproportion : production X absorption of CSF
(liquor pressure is not increased)
Old aged mostly men
- Hakimo clinical features :**dementia**
 - **urinal incontinency**
 - **gait apraxia**
(bradykinezia,wide base)
- MRI comunicated hydrocephalus
- **TREATMENT-** lumbal punction (- 50ml CSF)....
- gait improvement V-P shunt





MSA

MULTIPLE SYSTEM ATROPHY

- STN first s. parkinson sy MSA type P
- OPCA....first s. cerebellar sy MSA type C
- Shy-Drager sy....autonomic sy MSA type A
- (ortostatic hypotension, incontinency)

The possibility : combination or isolated

- Initial stadium: 50% autonomic sy
- 45% parkinson sy
- (5% cerebellar sy)
- SYNUKLEINOPATHY



- - prevalence 5-15/100 000, 8%
- **cerebellar + brainstem** SN, striatum, pallidum,
- ONUF's ncl (segment S2-S4)

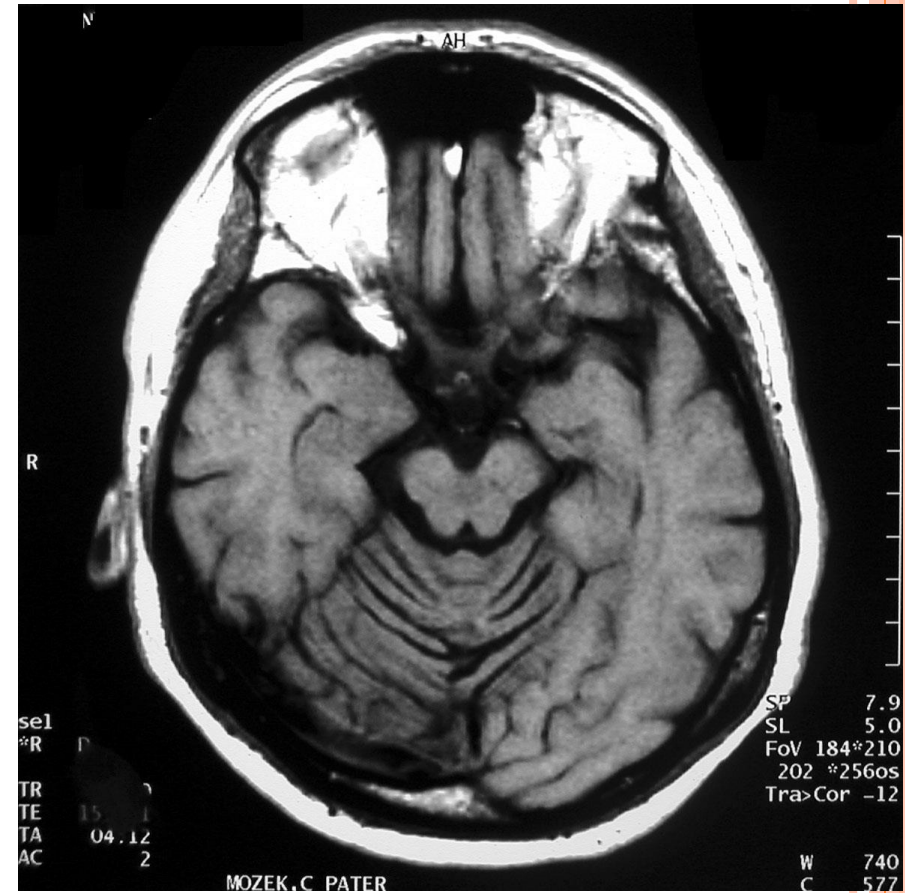
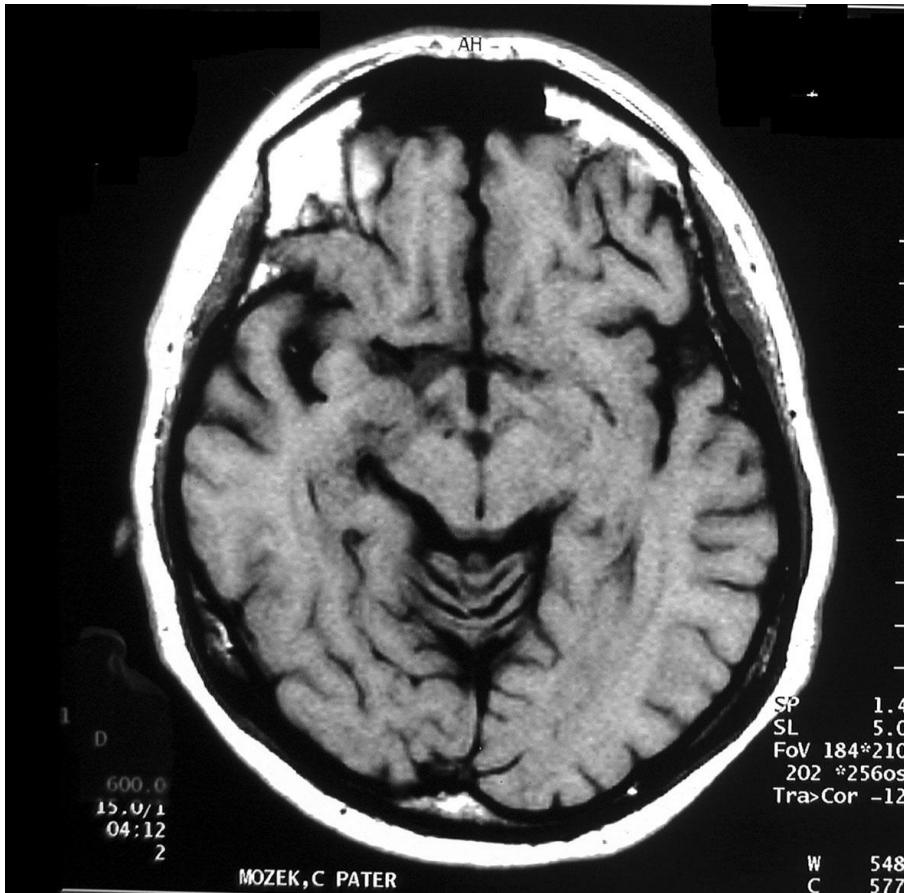
- - doparesponsibility in the **early** stadium
29%...**differentiation from PD difficult**

- Clinical Features: dystonia, pseudobulbar palsy, inspiration stridor, polyneuropathy
- - no dementia!



EXAMINATION

- Brain MRI – cerebellar + brainstem atrophy



- - **EMG anal external sphincter** – denervation of Onuf's ncl.
- - EMG for diagnostic Polyneuropathy
- - test of Vegetative system (EKG variability R-R interval)
- - Orthostatic test (BP while lying down and 1 min after posturedifferences 30/15)



PSP

PROGRESSIVE SUPRANUCLEAR PALSY

- - prevalence 7/100 000, 7-12%
- - middle and old age
- - **Atrophy mesencephalon** + pons
tegmentum + F polar part of cortex
- TAUOPATHY



CLINICAL FEATURES

- - pa sy with dominant **axial rigidity** without tremor
- - extended trunk
- - **early falls** due to postural instability
- - **vertical gaze palsy**, hypometric saccades
- - apraxia eye lids, retraction of upper eye lids (**surprised look**)
- - subcortical dementia (F lobe)
- - pseudobulbar palsy
- - dystonia (focal cervical)
- - inspiratory stridor
- - nondoparesponsibility



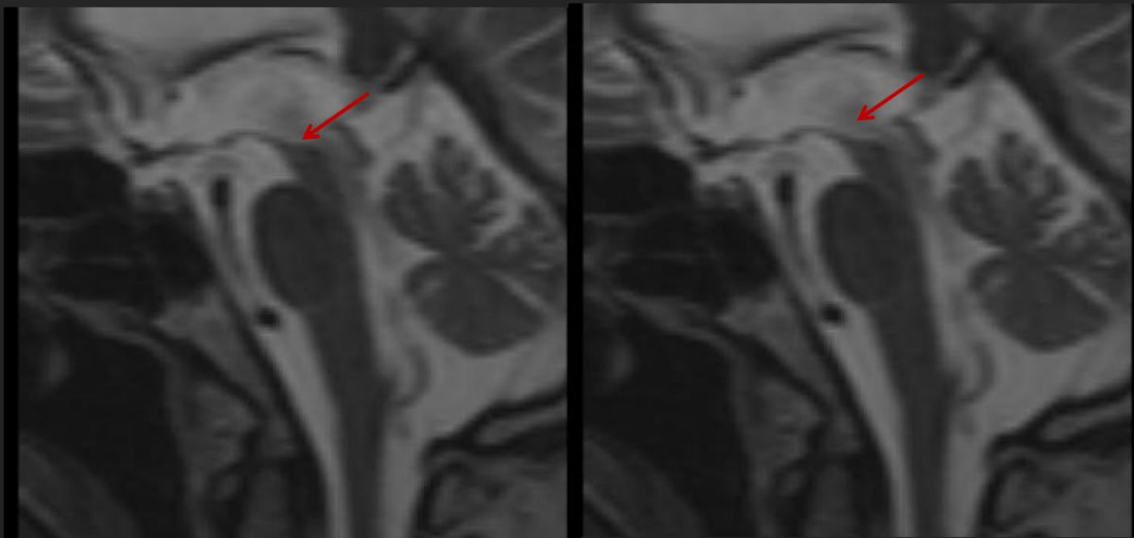
EXAMINATION

- - Hearing EPcentral lesion
- - Brain MRI... mesencephalon atrophy
- enlarged III. ventricle
-



Norma

MR obraz PSP



DLBD

DIFFUSE LEWY BODY DISEASE



CBD

CORTICOBASAL DEGENERATION

- - prevalence 0,5%
- - age over 70 years
- - **unilateral cortical atrophy F+P**
- - atrophy SN
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- TAUOPATHY



CLINICAL FEATURES

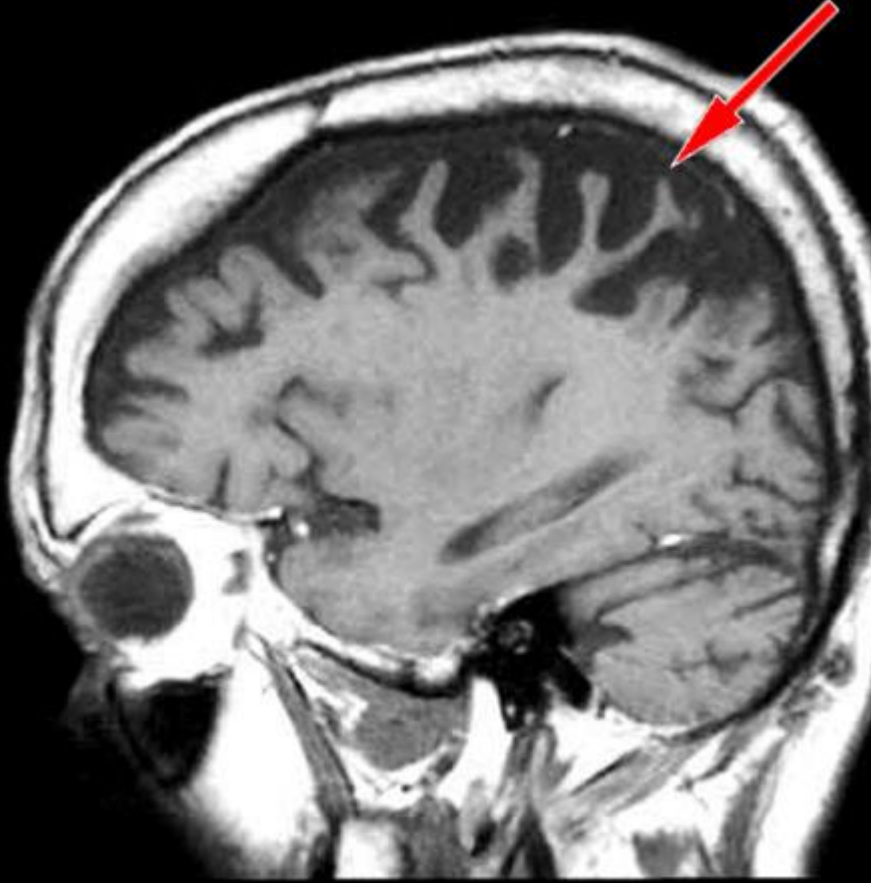
- - **contralateral hemiparkinsonism**
- - cortical (limb apraxia..**alien hand syndrome**, hemihypestesia, symbolic function disturbance)
- - dementia
- - cortical myoklonus
- - dystonia
- - pyramidal syndrome



EXAMINATION

- Brain MRI - **asymmetric cortical atrophy P + F**
- Brain PET - (hypometabolism F-P cortex)





WESTPHAL VARIANT HUNTINGTON D.

- - Autosomal Dominant
- - 5% patient of HD
- - **young age** (manifestation before 20 years)
- - the first symptom **parkinsonism** (rigidity + hypokinesia)
- - later chorea + dementia
- - rapid progression
- - genetic test



ADVANTAGE OF DAT SCAN IN PARKINSON SYNDROME

- PD asymmetric re-uptake in striatum
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- MSA,PSP symmetric re-uptake in striatum + postsynaptic disturbance

DLBD asymmetric re-uptake in striatum

VASCULAR pa sy normal

DRUG INDUCED pa sy normal

