Managing Movement Disorders in the older patient

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I guess I am not an expert in the area of prescribing for PD, but there is a huge population of people with it in Levin, that I inherited from a retired colleague …

.... they cause me a lot of stress.

First described by James Parkinson in 1817 monograph: "An Essay on Shaking Palsy“

What Parkinson said

Involuntary tremulous motion

Lessened muscular power

Propensity to bend the trunk forwards

Propensity to pass from a walking to a running pace

Senses and intellects uninjured

What modern literature says

Progressive neurodegenerative disease

Affects up to 200 per 100,000 people aged over 40

Uncommon in people younger than 40

Incidence increases rapidly in those over 60

Mean age at diagnosis is 70.5 years

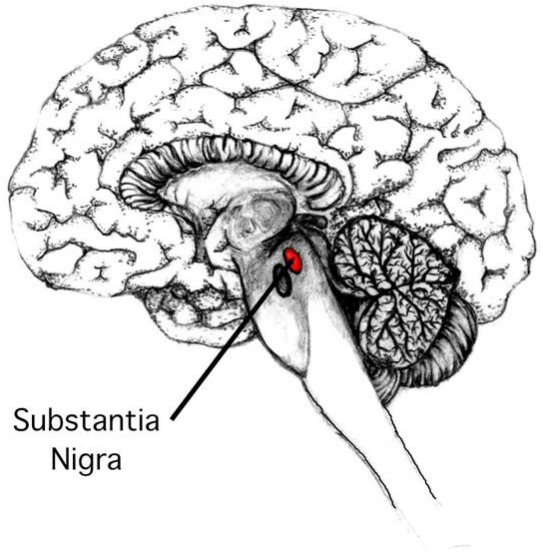
Traditionally been considered a motor system disorder

Now recognised to be complex with diverse clinical features that include neuropsychiatric and other non-motor manifestations in addition to its motor symptomatology.

Accurate diagnosis rests on recognition of characteristic symptoms and signs

Results from progressive failure of dopamine-generating cells in the substantia nigra and associated neural pathways.

… clinical picture dictated by the variable degree to which the pathways are involved



Clinical features 1: motor

Tremor

Rigidity

Bradykinesia

Postural instability

Festination

Forward-flexed posture

Speech and swallowing disturbances

Mask-like face expression with decreased spontaneous blinking

Small handwriting

Clinical features 2: Neuropsychiatric (of which more from Dr Johnson later!)

Cognitive disturbances including dementia (2 – 6 times risk): executive dysfunction, loss of cognitive flexibility, and abstract thinking, inappropriate selection of sensory information, reduced attention, slowed cognitive speed, reduced memory, visuo-spatial difficulties.

Mood disturbance: depression, anxiety, impulse control issues (binge eating, hypersexuality, pathological gambling).

Psychosis: hallucinations, illusions, delusions.

Behavioural disturbance: agitation, aggression

Clinical features 3: other

Sleep problems: daytime drowsiness, insomnia, REM sleep disorder

Autonomic dysfunction: orthostatic hypotension, oily skin, excessive sweating, incontinence, constipation, altered sexual function.

Ocular issues: decreased blink rate, dry eyes, tracking and saccadic problems, blurred vision, double vision.

Perceptual problems: anosmia, paraesthesia, pain.

So why does managing PD stress us

Treating people with PD is often easy in the first 7 years .... everything tends to work, but after that you get into trouble.

The language patients use is difficult. I find it hard to work out if problems are over- or under-dose. Plus, people with PD are very attached to their medication, and they want it increased when things are not good … this is not always helpful.

Mr J

79 year old man

PD for 8 years. Also has AF.

Medications: Madopar 250mg SR bd

Benztropine 4mg nocte

Dabigatran 150mg bd.

Presents to ED with dizziness on first standing and 2 episodes of LOC resulting in falling to the floor.

Lying BP 116/55 Standing BP 64/38. No change in HR.

Admitted to the Medical Ward.

Advised to increase oral fluid intake and add salt to food.

Provided with compression stockings.

Benztropine stopped. Fludrocortisone 0.1mg started.

Symtpoms improved over 72 hours.

Lying BP 131/69. Standing BP 97/53.

Discharged home.

Seen in OPD 4 weeks later.

Still dizzy on standing but no LOC or falls.

Has restarted Benztropine as noted marked worsening of PD symptoms.

Says he simply could not function without it, but cannot provided specifics of impairments.

Independent with transfers, mobility, personal cares and domestic tasks.

Seated BP 90/70. Standing BP 60/40.

Adamant he will not come off or even reduce Benztropine.

Started on Midodrine 2.5mg tds.

Reviewed 6/52 later.

Feels much better. No dizziness. No syncope. No falls.

Seated BP 100/70. Standing BP 90/60.

Extremely unhappy!

Angry that “he is getting a tablet to treat a tablet”.

Wants to stop Midodrine. Does not want to stop Benztropine.

Attempted to reassure and re-educate.

Offered another opinion – declined.

Offered another appointment. DNA.

They also often have managed their medications independently, so even if they are with a partner, the partner doesn't always really know what is going on.

You can't make changes and not follow-up, so it is self perpetuating that you see them, “twiddle” and then need to see them again.

Dopamine is important in “reward” systems, so withdrawing medication isn't always pleasant … it is important to do it slowly (weeks and months).

The trouble is often associated with cognitive decline (if you have it long enough, you will get cognitive decline) and balancing the movement disorder with cognitive disorder is tricky ... it stops just being a movement disorder that you are managing.

Mr H

Inherited from Neurology when he turned 65.

On madopar, pergolide and amantidine.

Some concerns with impaired cognition and insight, specifically that he was driving and hunting … episode when armed defenders had been mobilised due to significant hallucinations. Temporarily improved with donepezil … some difficulty getting him to decrease medications.

Mobility issues complicated by osteoarthritis in knee … had knee surgery, and was in AT&R (easier to change medication as inpatient).

Concern raised that his wife did not want sex as much as he did (I don't often ask about sex, he told me this with his wife there). She died soon after and there were issues with sexually inappropriate advances to granddaughter and carers.

Mrs S

Late 60s.

Very physically debilitated secondary to intracranial haemorrhage following insertion of deep brain stimulator 10 years prior

Wheel chair dependent, mute, dystonic posturing of left side,cared for at home by husband.

On madopar, pergolide and amantidine

Having blank episodes in the shower ? postural hypotension ? Seizure. Valproate helped so likely latter.

Pressure sore on chest wall associated with DBS battery, adjacent breast tissue and spastic arm. Botox to help release spasm helped. Removal of battery was complicated by wire protruding wound.

Very slow decrease in pergolide and amantidine

Mrs T

80s

Lives with husband

10+ years of PD

Presented with fall, where she and husband got tangled and he landed on her. Fractured ribs with haemopneumothorax, managed with intercostal drain.

Delirium while inpatient, improved with donepezil but then issues with urinary retention so this was stopped.

Trial of care at home unsuccessful, has gone into residential care.

Non-medical treatment options

Relaxation techniques can reduce rigidity.

Regular physical exercise can be beneficial to maintain and improve mobility, flexibility, strength, gait speed, and quality of life.

Physiotherapy produces additional improvements in motor symptoms.

- gait speed, base of support, stride length, trunk and arm swing movement.
- utilises strengthening exercises, respiratory exercises, assistive equipment (pole walking and treadmill walking), verbal cueing (manual, visual and auditory), altering environments.
- Needs to be co-ordinated with medication, ideally 45 minutes to one hour after

Speech and Language Therapy

- Lee Silverman voice treatment (LSVT)

Occupational Therapy

- techniques for pADL, provision of equipment, advice on home adaptation

Medical treatment
(of which more later from Dr Bourke!)

Levodopa remains mainstay in older people

Most widely used treatment for over 30 years (commonly as Sinemet and Madopar which have additional components)

Converted into dopamine by dopa-decarboxylase

Most does not reach the brain

Temporarily reduces motor symptoms

Side effects:

Due to breakdown before reaching the brain: nausea, dyskinesia, joint stiffness.

Due to compulsive overuse: dopamine dysregulation syndrome

Particular things dealing with older PD patients

Check cognition when things start to decline. Stopping amandine or pergolide may help with this. Consider donepezil.

Simplify medication by using long acting preparations or tolcopone / entacapone.

Change one thing at a time.

Talk with carers about hallucinations and other behavioural symptoms that occur in PD and with PD treatment e.g. infidelity, spending, gambling.

I quite like the explanation that as you get cell death with PD you may not need so much medication to have effect, giving you the opportunity to decrease medication.

I also remind people that it is a progressive, neurological degenerative condition and that it will get worse.

What we are doing is “managing problems” and this may not be PD or medication.