



South West Yorkshire
Partnership Teaching
NHS Foundation Trust

A large circular graphic composed of many small, overlapping rectangular segments of blue water ripples, arranged in concentric circles around a central white circle.

Parkinson's



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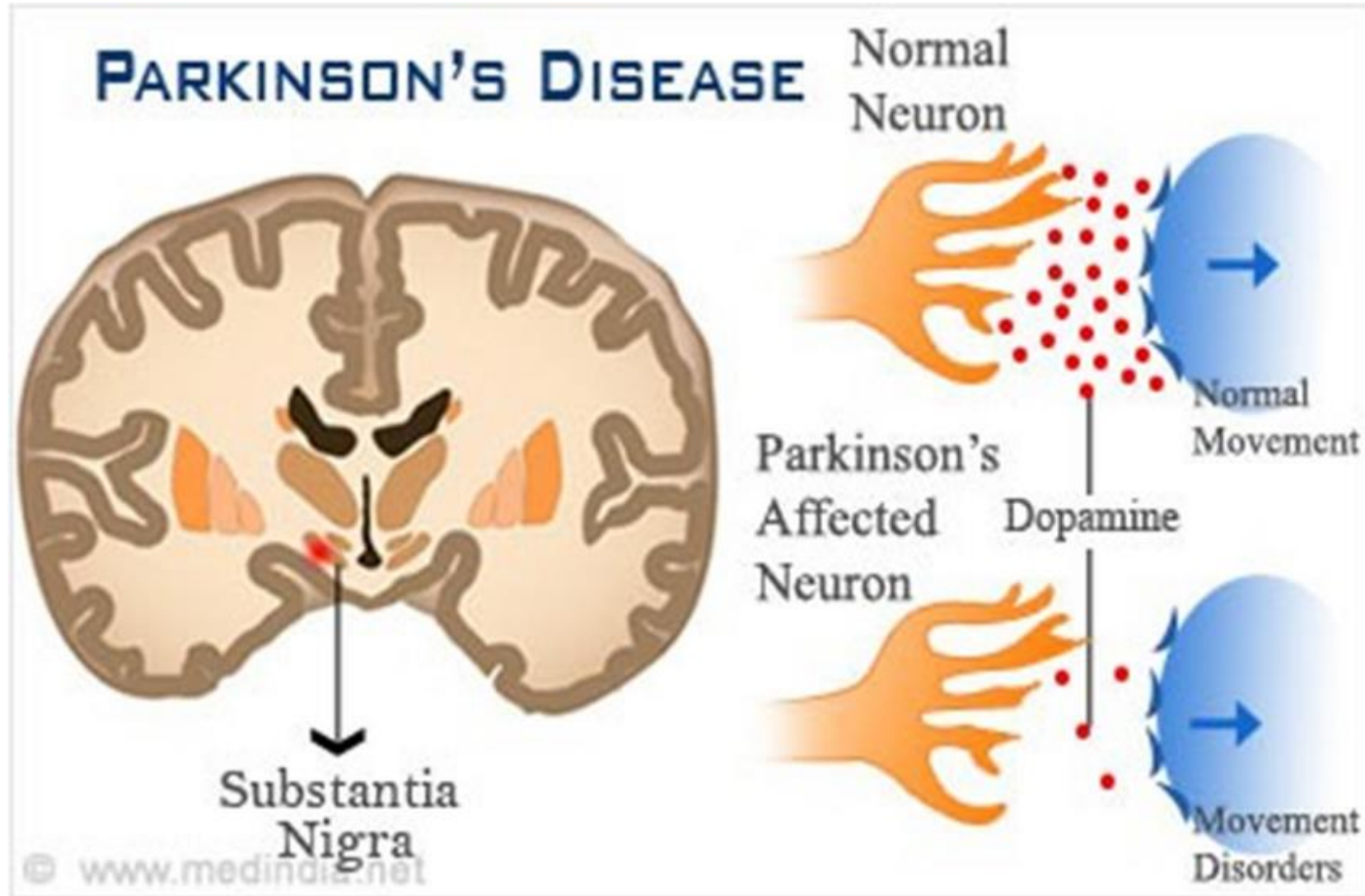
With **all of us** in mind.

Introduction

Parkinson's is the fastest growing, disabling neurological degenerative condition worldwide.

First described in 1817 by James Parkinson, in an essay on the shaking palsy. The symptoms of rigidity were mistaken for paralysis and since then the discovery of dopamine deficiency within the basal ganglia and subsequently led to the development of dopamine-replacement therapy.

40 years later Charcot, named the condition Parkinson's.



Prevalence and risk factors

Parkinson's is on the rise. In the UK today, someone is diagnosed every 20 minutes. By 2050, the number of people with Parkinson's worldwide will double to 25 million.

In the UK, around 166,000 people have been diagnosed with Parkinson's. Age is one of the biggest risk factors for Parkinson's. While the majority of people living with Parkinson's are older, it affects people of all ages. A diagnosis before the age of 50, is considered to be young-onset Parkinson's.

More men than women get Parkinson's. We don't know why men are more likely to develop the condition than women, but it may be due to a combination of biological factors (such as hormones or genetics) and lifestyle factors (such as exposure to chemicals).

Prodromal Parkinson's

The Parkinson's journey will start long before diagnosis, this prodromal period can vary from person to person up to 10 years before diagnosis.

- Hyposmia
- REM sleep behavior disorder
- Depression
- Anxiety
- Constipation
- Excessive daytime sleepiness

Diagnosis

The UK Parkinson's disease society brain bank represented the first formal diagnostic criteria and advised that due to diagnosis being made upon clinical presentation; there must be cardinal motor symptoms present to make a diagnosis of Parkinson's. These symptoms along with the prodromal symptoms will build a clinical picture for clinicians to aide diagnosis. Good history taking is essential for this.

- Bradykinesia

Plus one of

- Re emerging resting tremor, unilateral
- Rigidity

Common presenting symptoms.....

Motor

- Tremor - 75% of patients, initially unilateral. Exacerbated by anxiety.
- Rigidity - Lead-pipe, smooth resistance
 - cogwheel, ratchet resistance, usually caused by underlying tremor.
- Bradykinesia/akinesia, combined with rigidity causes paucity of movement.
- Flexion - bent posture particularly neck and trunk areas but if at hip and knee area this can lead to the typical tiptoe walking.
- Postural imbalance- detected by the pull test.

Common presenting symptoms continued.....

Non Motor

- Anxiety/ Depression
- Bowel and bladder problems
- Cognitive deficiencies/Mild cognitive impairment
- Olfactory deficiencies
- Sleep disturbance
- Pain
- Sexual dysfunction

Stages of Parkinson's

Hoehn & Yahr, created the original scale defining five stages based on the progression of motor symptoms.

BRAAK, refers to the degree of pathology to classify stages.

However, the main clinical management stages.

1. Diagnostic phase
2. Maintenance phase
3. Complex phase
4. Palliative phase

Treatment

- Levodopa with carbidopa or benserazide - Co careldopa/co beneldopa
- Dopamine agonist - pramipexole, ropinirole, rotigotine, apomorphine
- Catechol-O-methyltransferase inhibitors (COMT) - entacapone, opicapone.
- Monoamine oxidase-B inhibitors (MAOB) - rasagiline, safinamide, selegiline.

Advanced therapies

- Produodopa - Foslevodopa, administered via subcutaneous infusion pump
- DBS - dep brain stimulation, brain surgery.
- Duodopa - PEG, intestinal gel.
- Apomorphine - penject, subcutaneous infusion device.

Role of the multidisciplinary team

Aims of the MDT

- Provide expert advice and support to people living with Parkinson's
- Educate patients/relatives, carers and other professionals
- Reduce distress for patients
- Improve prognosis and create positive outcomes for the patient
- Help symptom management

The multidisciplinary team.....

Speech and language therapy - Dysphagia, dysarthria, hypophonia, sialorrhea assessment and management strategies.

Pharmacist - Supporting complex medication regimes, providing patient education, liaising with specialist nurse.

Neuro physiotherapist - Mobility assessment and provide specific exercise with re-educating movement patterns to enhance quality of life and reduce risk of falls and injuries. PD dynamics programme in Barnsley.

Occupational therapist - Assess and support daily activities, provide appropriate training and equipment or modifications as required

Mental health team - Assess and treat depression, anxiety and neuropsychiatric conditions. Provide treatment, CBT and counselling if appropriate.

Dietician - Nutritional assessment with ongoing support to maintain healthy weight

The multidisciplinary team continued.....

Social worker - provide comprehensive support assessing needs and supporting family's if appropriate.

General practitioner - Supporting general health, liaising with specialist nurse and co ordinating care when appropriate.

Practice nurse - support general health and well-being, liaise with specialist nurse and co ordinating care when appropriate.

Consultant – Diagnose condition, provide continued review and monitoring of progression in the hospital setting.

Specialist nurse – Provide ongoing expert care and support in the community setting. Review 6 monthly to monitor progression of condition and provide timely referral and signposting to other services. Educate patients, families, carers and other professionals. Medication management, symptom management, monitor for treatment side effects.

Local Parkinson's group – provide peer support for patients and families in the community, exercise classes weekly, coffee mornings, golf, Nordic walking, boxing, days out and monthly meetings with a guest speaker each time. Lots of information, advice and support.

Palliative care- EOL

- For patients on EOL pathway
- Liaise with specialist nurse and GP
- If having small amounts of diet/fluids alter levodopa to dispersible preparation
- If not having any diet/fluids then the use of PDMED calculator can advise on alternative medication if appropriate. <https://pdmedcalc.co.uk/>
- Rotigotine patch not always suitable for every patient, caution is required :-
 - *Dementia
 - *Delerium
 - *Agitation

Case study 1

- Retired 72 yr male generally healthy and independent
- Diagnosed idiopathic Parkinson's 5 years
- Wife has noticed a new onset of confusion for 3 days now
- 600mg levodopa daily, 2mg dopamine agonist once daily
- ? When did confusion start?
- ? When does confusion happen?
- ? How long has dopamine agonist been prescribed?
- ? Are bowels working well?
- ? Uti, or other reversible causes ?

Case study 2

- 65 year old female, 3 years diagnosed, fully independent.
- On 400mg per day of levodopa.
- Reporting some early wearing off and dose failure too.
- Chronic constipation.
- Poor appetite.

? When did constipation start?

? Are medications being taken on an empty stomach?

? Is she trying to open bowels when medicated or not?

? Are there any laxatives being taken?

? What does daily diet consist of?

? How much fluids daily?

Case study 3

- 69 year old female, lives alone (widower) and is independent, newly diagnosed 6months ago.
- 150mg levodopa daily.
- Reporting dizziness and episode of syncope.
- BP readings at GP practice show low BP, reviewed and lying and standing BP shows evidence of postural hypotension.

? Prescribed any antihypertensive treatment?

? Side effect of any other prescribed drug ie diuretic?

? When did this start?

? Daily fluid intake?

? Appropriate to consider use of fludrocortisone or midodrine? Liaise with GP.

Atypical Parkinson's

- MSA - Multi system atrophy.

Two main presentations parkinsonian and cerebellar, with autonomic dysfunction.

MRI can identify with Hot cross bun symbol in pons area of brain in MSA-C.

Rapid progression 6-10 life span, resistant to antiparkinsonian treatment, therapy input required.

Atypical Parkinson's cont

- PSP- progressive supranuclear palsy.

Two types - Richardson's syndrome - PSP-R early falling & cognitive issues.

- Parkinsonism variant – PSP-P presents like Parkinson's with tremor and bradykinesia.

Caused by abnormal tau protein, causes frequent falls backwards, and is characterized by vertical gaze palsy. Rapid progression with severe disability within 3-5 years, MRI scan can sometimes show the hummingbird sign of the brainstem area.

Not responsive to antiparkinsonian treatment and requires therapy input.

Atypical Parkinson's cont

- CBD- cortico basal degeneration.

A rare condition affecting the brain cortex and basal ganglia, severe motor and cognitive decline.

Symptoms progress severely over 5-10 years with a unique symptom of alien arm phenomenon and marked stiffness, rigidity and tremor. With poor coordination and cognitive decline.

No test for cbd can be misdiagnosed as Parkinson's or Alzheimer's in the very early stages.

Life expectancy is 5-10 years after diagnosis.

Not responsive to antiparkinsonian treatment, therapy input required.

How to refer

Patients with a formal diagnosis of Parkinson's, who live in the Barnsley area and with a Barnsley GP can be referred to the service.

Referral to the service is via the RightCare spa team, or via corridor referral on SystemOne.

Patient information required:

- Name
- DOB
- Address
- NHS number
- Diagnosis and which consultant they are under for this.

References/Resources

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