Parkinson's Disease

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Segment 1
MAR 9 2004
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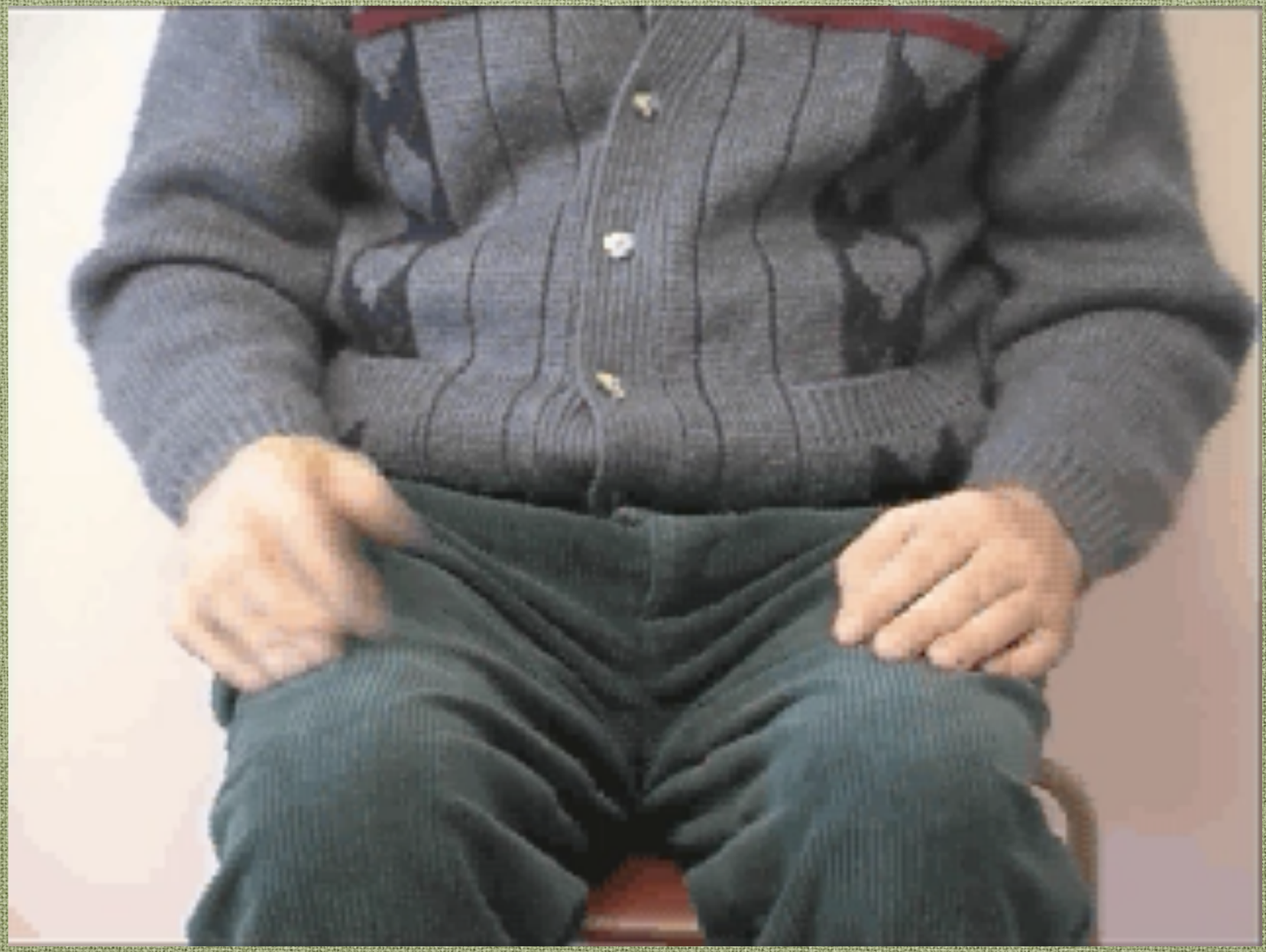
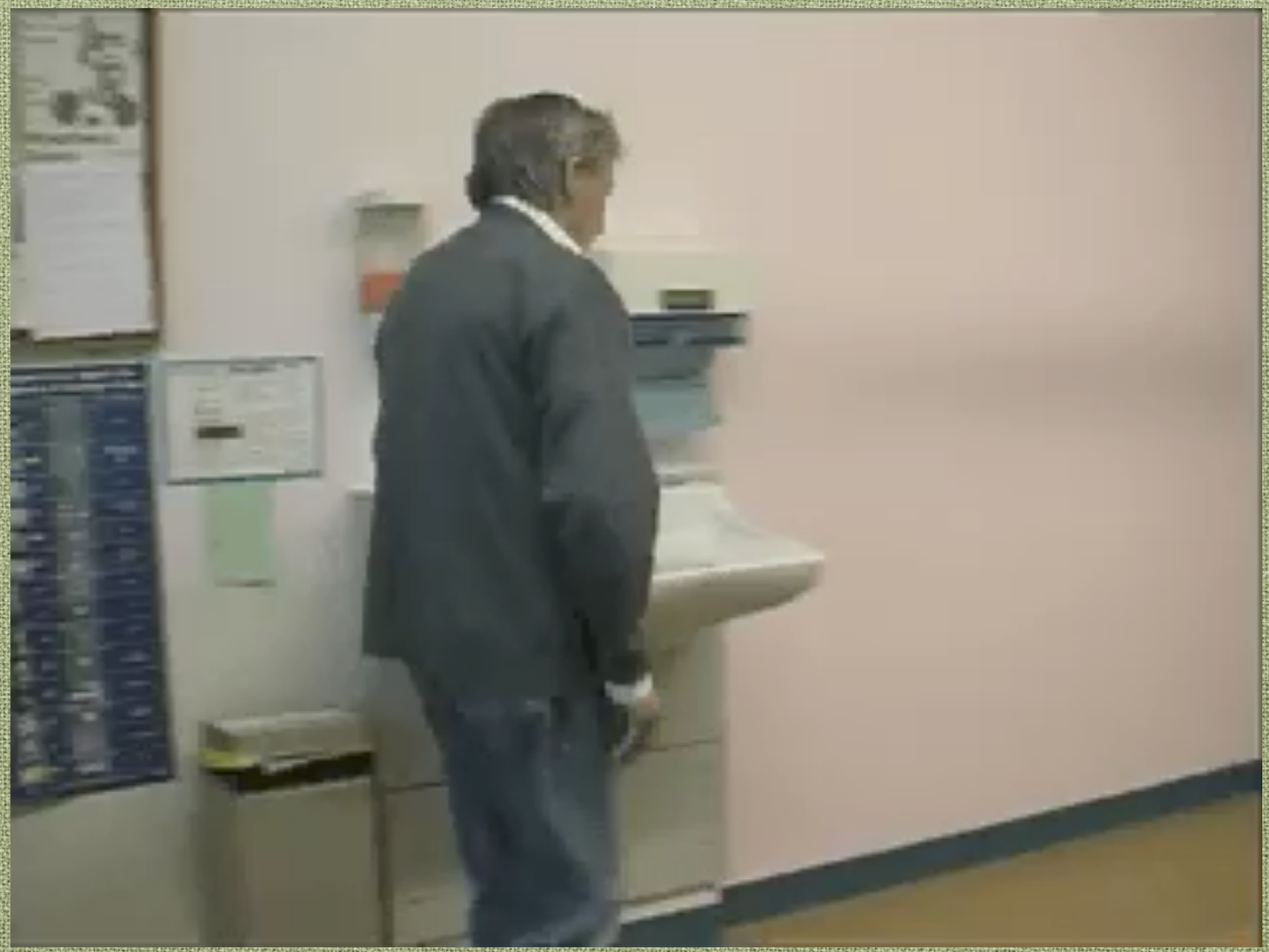
Which tremors to refer ?

- All new tremors not essential tremor
- Diagnostic uncertainty
- Essential tremor requiring further management
- Tremor with other neurological symptoms:ataxia,cerebellar signs, parkinsonism

Essential Tremor

- Check u and e , LFT, TFT, calcium
- 50 % of essential tremor reponds to medication
- propanolol, Primidone, pregabalin, gabapentin,clonazepam





Parkinson's Disease

- bradykinesia
- rigidity
- tremor
- postural instability


UCLA


Six months following VP shunt

Parkinsonism

- Rigidity, bradykinesia, gait shuffling, tremor:
- Idiopathic parkinson's disease
- Vascular Parkinsonism
- Normal pressure hydrocephalus
- Parkinson's plus
- Iatrogenic

Parkinson's Presentation

- tremor
- physical slowing
- reduced dexterity
- micrographia
- cramping
- Gait disturbance
- non-motor symptoms

Parkinson's Disease

- Early 'Honeymoon period'
- Middle period -wearing off
- Late period -dyskinesia's, fluctuations, cognitive impairment

Drugs Used In Parkinson's Disease

- Co-careldopa/co-beneldopa
- CR preparation
- Dispersible preparation -rescue/ morning
- Stalevo is co-careldopa plus entacapone

Entacapone

- Catechol-O-methyltransferase(COMT) inhibitor. Prevents breakdown of levodopa in the brain and periphery

Dopamine agonists

- Non-ergot(ropinirole,pramipexole,rotigotine)

- Ergot (bromocriptine,pergolide,cabergoline), Ergot drugs require monitoring

Dopamine agonists

- advantages over levodopa- less dyskinesia, longer acting

- disadvantages over levodopa- more risk of hallucinations, compulsive behaviour, postural hypotension, daytime sleepiness.Specific ergot side-effects.

Monoamine oxidase inhibitors

- Selegiline 5 to 10mg PO,1.25 mg sublingual
- Rasagiline 1 mg od (?neuroprotective)
- Beware of Serotonin syndrome with SSRI and tricyclics: pyrexia,agitation,tremor,sweating,diarrhoea
- Tramadol, pethidine, methadone contraindicated

Combining MAO inhibitors (Rasagiline,Selegiline) with antidepressants a complex issue

- Rasagiline. NICE advise combination with 'SSRI best avoided'. However Citalopram relatively safe. Manufacturer report no contraindication. If using tricyclics- Nortryptiline, Doxepin safest. These have a low serotoninergic activity.
- Avoid Fluoxetine and Fluvoxamine
- Study of 1500 patients -no cases of serotonin syndrome

- Selegiline- avoid antidepressants. SSRI should be avoided. Low serotoninergic tricyclics have sometimes been used but ‘not advised’.

Apomorphine

- Water soluble dopamine agonist
- Given as a rescue treatment in pen form
- Given as a continuous daytime infusion
- Advantages- help smooth motor fluctuations. Less hallucinogenic than other dopamine agonists

Amantadine

- Can help dyskinesia

New Drugs

- Safinamide (Xadago)
- Opicapone(Ongentys)

- NICE PD guidelines 2006
- New guidelines 2017- current draft guidelines available

What to initiate on diagnosis ?

- Depends on degree of motor impairment
- Levodopa - Most improvement in motor symptoms
- Dopamine agonists- Intermediate improvement in motor symptoms
- MAO inbitors- less improvement
- Most patients are best on a combination of levodopa and a dopamine agonist

Primary Care Responsibilities

- Refer appropriate patients
- Refer any adverse events
- Ensure monitoring as indicated
- Inform specialist if medication discontinued
- Seek specialist advice if any concerns
- Annual medication review

Further Nice Recommendations

- GP responsibilities- Very little. Refer for most issues directly related to Parkinson's
- Refer to specialist for diagnosis untreated
- If motor fluctuations-manage according to specialist advise.
- If behavioral, psychotic or cognitive complications-obtain specialist advice

How to contact Neurology for advice

- Patient or GP : PD nurse specialist- Telephone
- Neurologist contact- written or telephone message to secretary(Barnsley or Sheffield Hallamshire)
- If above not available during emergency- contact the on-call neurology team at the Hallamshire,Sheffield

Further Nice recommendations

- Patent centered management.
- Give oral and written communication to the patient and family
- Care plan
- Give point of contact to specialist services(usually PD nurse specialist)

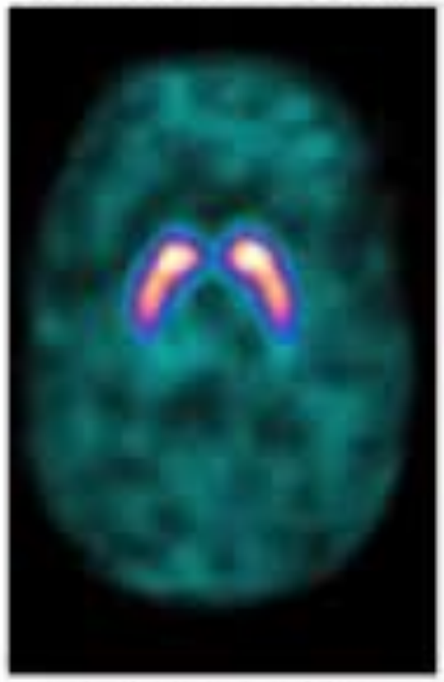
- Diagnose using UK PD society brain bank criteria.Encourage patients to donate to the brain bank

- Review every 6-12 months

- Document discussion of risk of impulse control disorder, sleep attacks and hallucinations

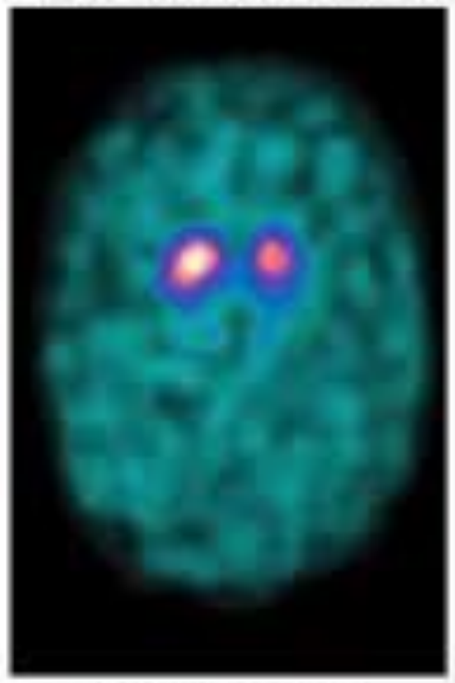
- Consider DAT Spect in atypical tremors

NORMAL SCAN



"Comma"-shaped
Possible essential tremor

ABNORMAL SCAN



"Period"-shaped
Possible Parkinsonian syndrome

- Patients should have access to physio, OT, SALT, dietician,
- Advise VIT D supplementation
- Palliative care referral and end of life planning when appropriate.

non-motor symptoms

- mood
- sleep
- cognitive disorders
- impulse control disorders
- autonomic dysfunction
- presymptomatic symptoms

presymptomatic non-motor symptoms

- anosmia
- sleep
- depression
- pain

Depression in Parkinson's Disease

- 40% incidence
- only 3 randomised trials Nortryptyline and SSRIs
- Manage as non-PD patients

Anxiety in pd

- Few controlled treatment studies
  - Bromazam
  - Manage as non-PD patients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The Video Images of Sleep Attacks in Parkinson's Disease

M Hirayama, T Nakamura, N Hori,
Y Koike, G Sobue

Movement Disorders

Parkinson's & Sleep Problems

- Insomnia
- Daytime Sleepiness
- Disruptions during Sleep

Insomnia Due to Parkinson's: Causes

- Lack of muscle and mental relaxation
- Stiffness, restlessness, and difficulty of moving into comfortable positions
- Tremor can be bothersome
- Medications wear off during the night

- Be aware that sleep issues are common and can have driving/work implication
- REM sleep behaviour disorder. Treat with clonazepam,melatonin
- Daytime sleepiness requires medication review, Modafinil
- Night time akinesia- consider medication review, CR levodopa, Rotigotine patch
- Mirtazepine

Cognitive Disorders in PD

- PD patients may present to you with cognitive disorders.
- You can review triggering factors and non PD medication and refer to neurology
- Neurology can consider cholinesterase inhibitors in mild to moderate PD dementia and referral to dementia pathway. Consider drugs in severe dementia and Memantine if cholinesterase inhibitors not tolerated.

WHAT TO DO WITH THE PSYCHOTIC PARKINSON'S PATIENT

- Assess for obvious provoking factors-concurrent medical illness/infection/metabolic disturbance
- Refer to neurology
- Specialist can discontinue drugs - anticholinergics, amantadine, MOA inhibitors, dopamine agonists, levodopa
- Specialist can initiate quetiapine, clozapine
- Specialist can consider cholinesterase inhibitors

- dopamine dysregulation syndrome
- impulse control disorder -
  - Refer to specialist (to reduce dopamine agonist, (?amantadine, acamprosate),cognitive behavioural therapy, functional neurosurgery

NHS op cures man hooked on gambling

By **Gareth Crickmer**

A COMPULSIVE gambler has undergone a £30,000 brain operation on the NHS to stop him blowing more of his cash.

Raymond Mandale had surgery after claiming drugs that he took to treat Parkinson's Disease gave him a gambling habit.

Mr Mandale, 58, was a non-gambler before taking a course of the unnamed drug. But the fitter in a paper factory blew £10,000 on gaming machines at his local bingo hall soon afterwards.

He claims the stress of his condition almost led to the collapse of his marriage to wife Joan.

The couple are now taking legal advice to see if they can sue the American manufacturers of the drug, claiming that they failed to warn him of the bizarre side-effect.

The father-of-two says he didn't know the treatment could lead him to develop addictive and compulsive traits.

Probes

Doctors decided he could only be cured through a six-hour operation. It took place at Newcastle General Hospital in February.

Surgeons fixed probes to his brain which were wired to a neuro-stimulator sewn into his chest. He is still on moderate medication, but electrical stimulation with apparatus he himself controls has replaced most of the chemical stimulation from drugs.

The operation is not to cure the gambling addiction but to alleviate Parkinson's symptoms so that the medication causing the problem can be reduced. On legal advice, he will not name the drug. He claims that since his case emerged, the manufacturers have put clearer warnings on their labelling.

Mr Mandale, of Workington, Cumbria, said the drug's effectiveness was not in question, but insisted the side-effects were unforeseen. He said: "When I was gambling I begged, borrowed, stole and I lied. I was out of control for a year. I would sometimes tell my wife that I was going round to the shops and I would be straight round to the bingo hall.

"I had some wins but it all went back in. Sometimes in the mornings I would stop and think and tell myself I had to stop, but then I took my medication and all resistance ended."

Joan said: "We have a strong marriage but it almost came apart. I was off work for seven months with stress and shingles. All I wanted to do was to stay at home and cry."

Shaun Edwards, operations manager of Graves (Cumberland) Limited, which operates Workington's Opera Bingo hall, said Raymond was "a happy customer".

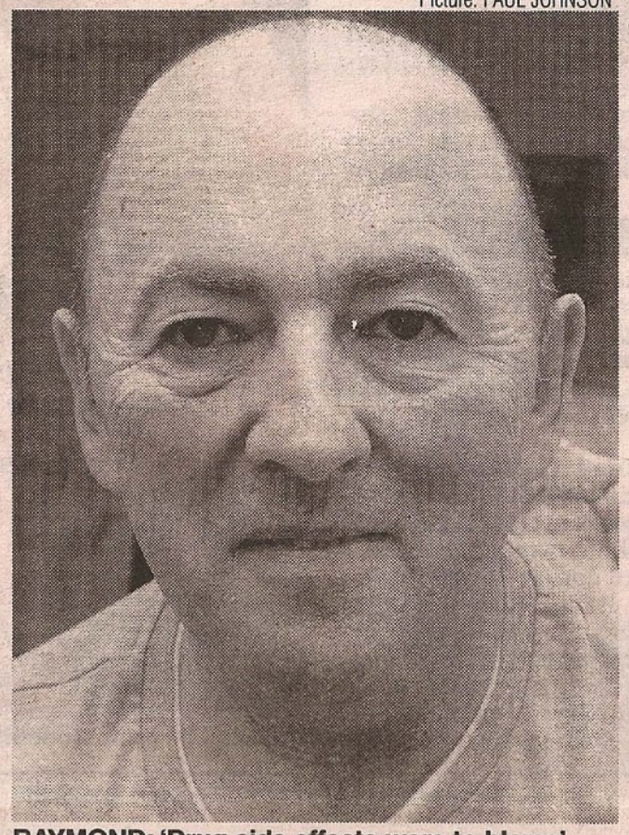
"None of his actions ever gave us any cause for concern.

"We have a self-exclusion scheme and we do everything to inform and enable people how to control their gambling."

Professor Tipu Aziz, a professor of neurosurgery at John Radcliffe Hospital, Oxford, said it was recognised that certain drugs can cause addictive side-effects.

He said the operation for Parkinson's patients was highly successful. Around 40,000 people worldwide have had it.

Picture: PAUL JOHNSON



RAYMOND: 'Drug side effects were to blame'

Amantadine May Reverse Punding in Parkinson's Disease -- Observation in a Patient

K Kashihara, T Imamura

Movement Disorders

- Autonomic symptoms (including orthostatic hypotension, constipation, nausea, vomiting, heat intolerance, urinary frequency, urinary incontinence, urinary urgency, nocturia, sweating, hypersalivation, drooling, seborrhea, sexual dysfunction in men and women)

treatment

- Anti-emetics
- postural hypotension -(stop antihypertensives) Midodrine, fludrocortisone, ephedrine
- urinary frequency- anticholinergics, Trospium less likely to provoke confusion
- constipation
- hypersalivation- glcopyrrolate, botulinum,hyoscine

Useful Aspects to Assess in Primary Care

- Anxiety
- Depression
- Hallucinations
- Postural Hypotension/Bp
- Constipation
- Dysphagia
- Pain

- Sexual function
- Skin lesions
- Sleep problems
- Dementia
- Drooling
- Ergot side-effects: malaise, cough, heart failure, abdominal pain