



Movement Disorders Section

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Fifth British Geriatrics Society Movement Disorders Section Award

- medical, nursing and therapy students are invited to submit an essay
- title ‘can we change outcomes in Parkinson’s disease?’
- maximum 1500 words and up to 10 references

Fifth British Geriatrics Society Movement Disorders Section Award

- first prize £500, second £300, third £200
- winning essays published on the BGS website (award info on www.bgs.org.uk)
- essays and enquiries to editor@bgsnet.org.uk
- closing date 30th April 2010

Parkinson's Disease for the Post Take Ward Round

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Declaration of Interests

Dr Kessel has been sponsored by and/or acted as an advisor for;

- SmithKlineGlaxo
- UCB Pharma
- Boehringer Ingelheim
- Britannia Pharmaceuticals
- Orion Pharma
- Teva Pharmaceuticals
- Napp Pharma

Objectives

- Acute management of PD emergencies
- Awareness of rarities
- Avoid making sick PD patients a whole lot worse

How Common is PD in Hospitals?

B. Kessel : BGS Aut 2009



Study 1; Causes of emergency admissions

B Kessel - BGS, Aut 2009

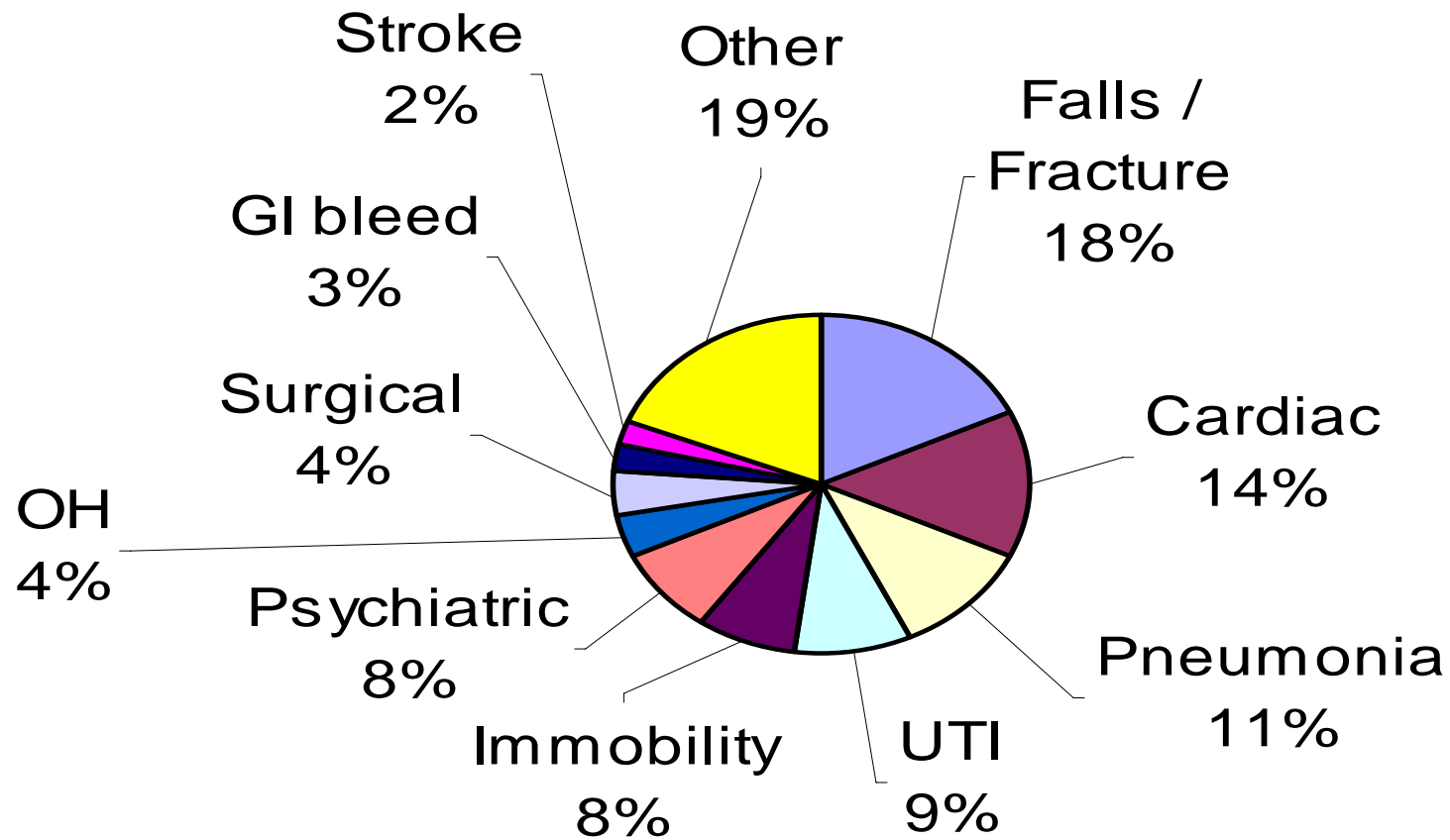
- 4 year study in UK DGH
- 129 patients admitted
- Mean LOS 17.3 days
- New diagnosis of PD in 4.9% of these patients

Emergency hospital admissions in idiopathic Parkinson's disease

Henry Woodford, BSc, MRCP, Richard Walker, MD, FRCP

Movement Disorders 2005 Sept:20(9):1104-8

Causes of emergency admissions



Study 2; Causes of emergency admissions

B Kessel - BGS, Aut 2009

All acute admissions of PD patients in University Hospital, Graz, Austria

- 84 patients over 31 months
- 36% discharged from ER
- 64% required admission

Special aspects of Parkinson Disease. Disturbing factors of the natural course of the disease

Poster from ICPD June 2009 N Homayoon et al

Reasons for admission

- Infections 56%
- Motor symptoms 39%
- Psychiatric symptoms 15%
- Falls 6%
- Non-specific or overlap 51%

Motor symptoms (39%)

- Motor impairment 19 (23%)
- Dysarthria 2 (2%)
- Dysphagia 4 (5%)
- Motor fluctuations and dyskinesias 8 (9%)

Types of problems on the PTWR

- Sick patients who also have PD
- Sick patients due to PD
- Sick patients due to mismanagement of PD

Sick patients with PD

- Treat appropriately for the acute illness but beware;
 - Higher risk of aspiration
 - Higher risk poor mobilisation and falls
 - Higher risk of delerium
 - Longer time to recover
- Remember
- Avoid certain drugs
 - Don't leave 'nil by mouth'

Sick Patients due to Parkinson's complications

BD Kessel - BGS, Aut 2009

- Acute akinesia
- Acute dyskinesias
- Acute delirium
- Drug side effects
- Rarities

Acute Rigid States

- Acute de novo Parkinson's disease
 - Usually L-dopa responsive
- Chemotherapy induced PD
 - E.g. Low dose oral methotrexate
 - Anti-emetics
- Acute neuroleptic treatment

Acute akinetic states (hens teeth)

■ Infections

- Bacterial eg Streptococcal
- Viral e.g. Encephalitis Lethargica, Coxsackie B2, Japanese B encephalitis, West Nile Fever,
- Tetanus

■ Poisoning e.g carbon monoxide, strychnine, organophosphate, cyanide, MPTP, methanol, ethylene glycol

Treatments

- Acute PD or chemotherapy –
L-dopa/dopamine agonists
- Viral cause – acyclovir

Also could treat symptomatically with L-dopa or dopamine agonists (may increase dyskinesias)

Acute severe dyskinesias

Management;

acute

- Controlled decrease of PD medication
- Watch for rhabdomyolysis

longer term

- Consider Amantidine
- Consider Apomorphine
- Consider DBS

Psychosis

Consider if due to PD or PD drugs

- PD psychosis

- If PD psychosis; quetiapine or clozapine
- If wont tolerate oral then Benzodiazepines

- If drug related

- Usual considerations for non-pharmacological management of delirium
- Decrease antiparkinsonian agents appropriately according to “league table”

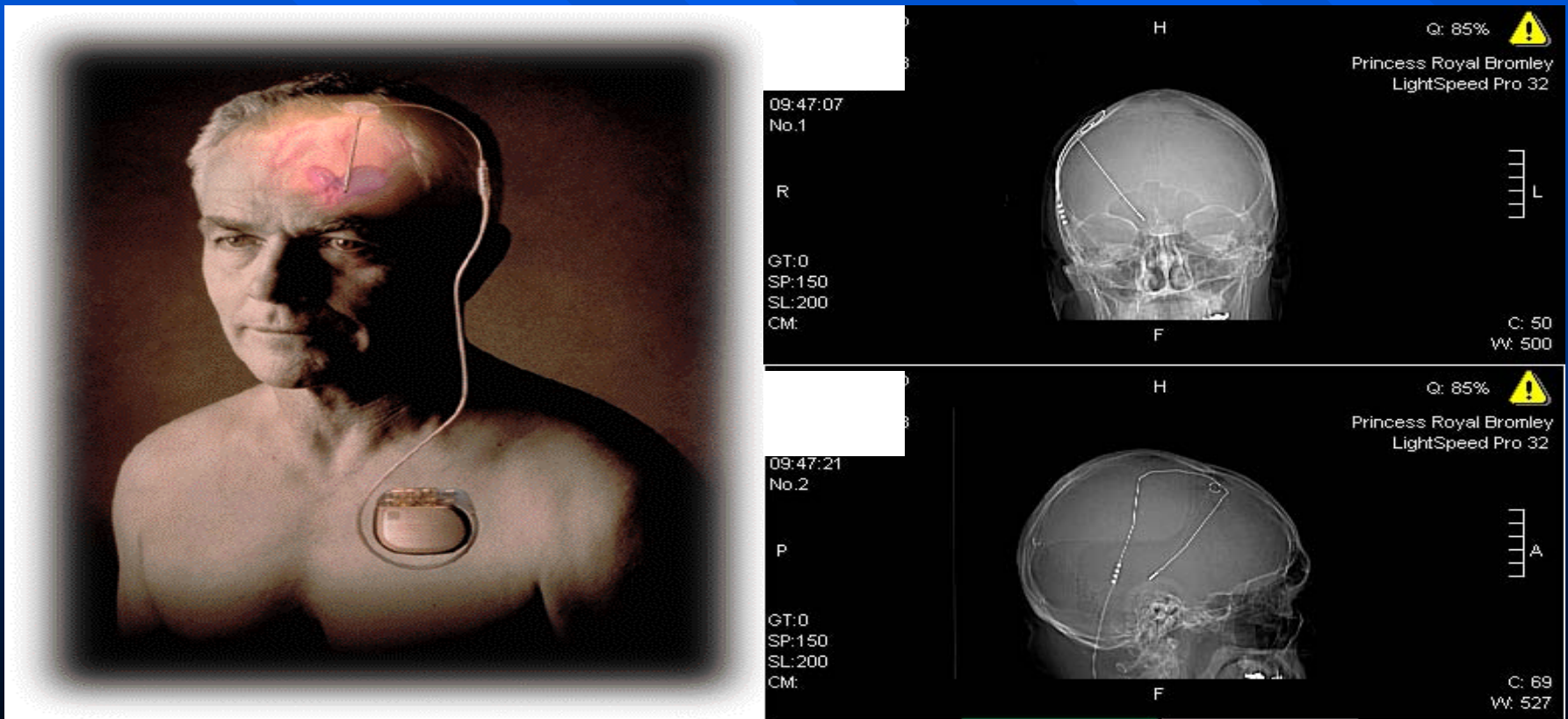
Psychiatric Side-effects

- 'last in, first out principle'
- Order of stopping;
 - anticholinergics
 - selegiline
 - amantidine
 - COMT inhibitor
 - dopamine agonists
 - L-dopa

Other Parkinsonian Emergencies – more Rarities

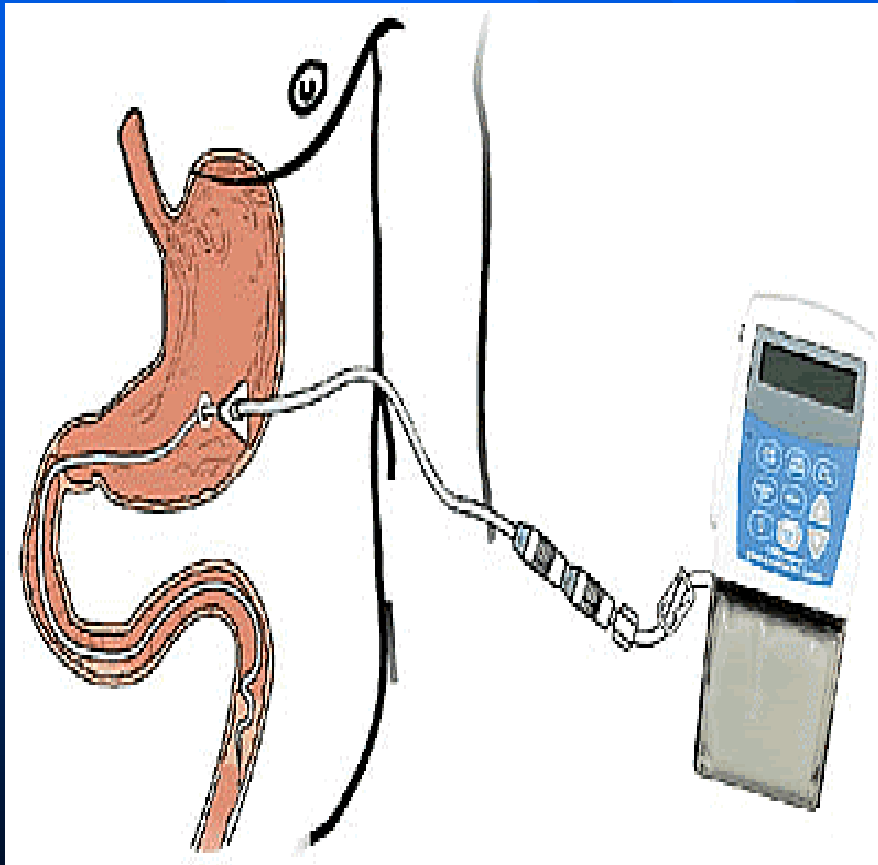
Deep Brain Stimulators

- DBS complications – refer back to hospital of operation



Duodopa therapy – continuous L-dopa infusion into jejunum

B. Kessel – BGS, Aut 2009



Duodopa

- Treat the PEJ complications such as infections as you would with any enterostomy tube
- But cannot reinsert a normal enterostomy tube as special tube
- For Levo-dopa complications refer back to hospital of insertion

Multi System Atrophy

- Respiratory compromise – due to laryngeal dystonia
 - Stridor
 - Sleep Apnoea

Can cause sudden death

Management

- CPAP
- Tracheostomy

Sick patients due to mismanagement of PD

Prescribing Medications in PD patients during acute admissions to a DGH

- 35 emergency admissions of PD patients over 1 year
 - 26 pts (74%) had drugs stopped, omitted or prescribed inappropriately
 - Of those whose drugs were stopped 16 (61%) had clinically significant sequelae

Sequelae of drug errors

8 patients had serious clinical sequelae

- 1 fractured hip
- 1 'cardiac arrest and stroke'
- 1 required ITU

Avoidance is best therapy

- Only admit if really necessary
- ‘Get it on time’ campaign by PD society
 - Educate patients and carers
 - Educate medical staff
- Allow competent patients to self medicate
- If ‘Nil by mouth’ ensure alternate route
 - NG tube and crush sinemet or dispersible madopar
- Consider Rotigotine patch (Neupro®)

PD Emergency Guidelines

Available on the intranet;

- Names of Drugs
- Routes of Administration
- Drug Availabilities
- Common Complications (Management and Treatment)
 - Confusion and hallucinations
 - Nausea and vomiting
 - Dizziness and falls

PD Emergency Guidelines cont.

Advice on ;

- Management of complications
- Drugs to use
- Drugs **not** to use

- Must not stop all PD drugs as risk of Neuroleptic Malignant-Like Syndrome

Neuroleptic malignant like syndrome

NMS can be caused not only by neuroleptics but also by abrupt withdrawal or decrease of anti-Parkinsonian treatment

Differential diagnosis includes;

- Viral encephalitis
- Status epilepticus
- Thyroid storm
- Lethal catatonia
- Malignant hyperthermia
- Heat stroke

Neuroleptic Malignant-like Syndrome

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Levenson's criteria

Major Criteria:

- Rigidity
- Fever
- Elevated CK

Minor Criteria:

- Tachycardia
- Abnormal BP
- Tachypnoea
- Altered Mental status
- Diaphoresis
- Leukocytosis

Diagnosis requires three major or two major and four minor criteria

(Pandya Mayur, Lepoldo Pozuelo: A Malignant Neuroleptic spectrum: review of Diagnostic Criteria and treatment implications in three case reports: *International Journal of Psychiatry in Medicine*; Jan 2004; 34;3).

Management

- Supportive care
 - i.v. fluids
 - Cooling down
 - Consider HDU/ITU
- Restart Parkinson medication
 - L-dopa through NG tube
- Other options
 - Apomorphine (?Rotigotine patch)
 - Dantrolene
 - Lorazepam
 - ECT
 - Methyl prednisolone

Conclusion

PD patients problems are common and eminently treatable but remember;

Get their drugs right

Get their drugs on time

Make them better not worse

Thank you

