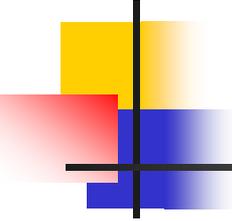


Neuropsychology within Acute Stroke Services

St Georges Hospital
6th October 2010





What will be covered today

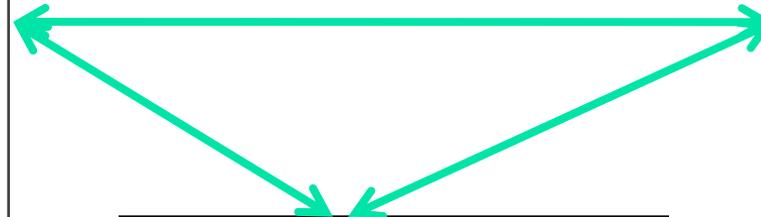
- Introduction to neuropsychology
- What do neuropsychologists do?
- Rational & context of neuropsychological intervention in Acute Strokes Services
- Role for neuropsychology within Acute Stroke Services at St Georges Hospital
- Common difficulties faced by Stroke patients and how neuropsychologists can contribute to the management of these problems

Introduction to neuropsychology

What is neuropsychology?

- Study of an individual from a **bio-psycho-social** perspective following brain injury

**Biological /
Neurological
Factors**
e.g. Location of
injury , medical
HX, mental
health HX, age

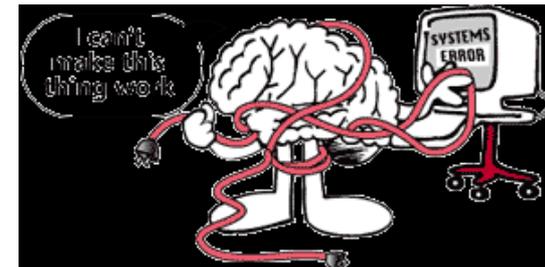


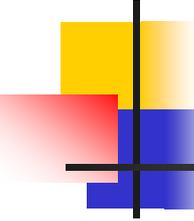
Psychological factors
e.g. Previous coping
mechanisms, current
adjustment,
cognitive changes,
insight, behavioural /
personality changes

Social Factors
e.g. Married /
partner, family,
educational HX,
occupational HX,
environment

What do neuropsychologists do?

- 1.) Diagnostic role
- 2.) Assess changes that have occurred following brain injury and aims to help the patient restore / compensate for the injury
 - Assess and treat mood related problems
 - Assess and treat behavioural / personality problems
 - Assess and treat cognitive problems

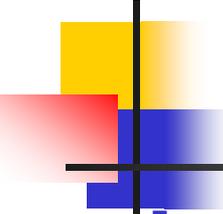




Rational & Context

Documents Consulted -:

- British Psychological Society Guidance
- DoH: Expert Patient
- DoH: National Stroke Strategy
- National Clinical Guidelines for Stroke (RCP & BPS)
- National Stroke Improvement Agenda



Why do we need NP services in Acute Stroke?

- Information, advice and support for patients, relatives and carers – including practical advice, emotional support and information throughout the care pathway
- Early high-quality specialist rehabilitation – including clinical psychology
- Assessment of mood, self identity and self-efficacy and appropriate interventions
- Formal cognitive Assessment for patients returning to cognitively demanding activities (e.g. work, driving)
- Mental Capacity Assessments
- Training and consultation within the MDT

Rationale:

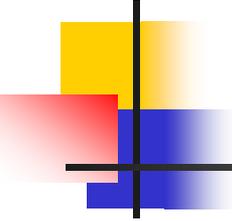
- Emotional difficulties after a stroke can have an impact on long-term physical recovery and lead to depression and isolation.
- Carers are also vulnerable to difficulties in coping and to depression.
- Early intervention reduces mortality and long-term disability and facilitates the adjustment process

Role of neuropsychology SGH in Stroke Services

- Hyper acute setting
- Acute setting



- **Working with the patient** – assessment and treatment of mood, behaviour and cognitive skills
- **Working with the family** – helping with adjustment related difficulties and coping, facilitating decision making about care
- **Working with the MDT** – contributing towards discussions on discharge planning and care packages for patients
- **Education & training** – regarding psychological sequelae of Stroke and management / treatment



Common psychological difficulties after Stroke

Normal reaction to an abnormal event

- Low mood
- Worrying about the future – “how will I cope”
- Sleep problems
- Anxiety – “what if it happens again”

If problems persist, they can interfere with rehab -:

- Patients are not motivated to engage in rehab
- Patients feel helpless about improvement / progress
- Patients might be fearful of getting better in case they get sent home and have to cope on their own
- Patients are scared to do too much in case they have another Stroke

Common psychological difficulties after Stroke

Depression – in up to 30 - 50% of Stroke patients

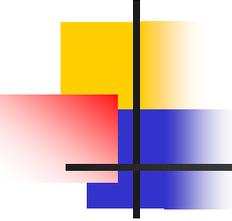
- Feeling sad (verbally or body language)
- Tearful
- Not engaging in rehab & generally de-motivated
- Not sleeping well / sleeping too much
- Less interest in eating / always eating
- Constantly thinking about what has happened and asking why



Anxiety – in up to 25% of Stroke patients

- Unable to relax
- Nervous
- Scared
- Fear of the worst happening / losing control
- Heart racing
- Panicking
- Quick and shallow breathing

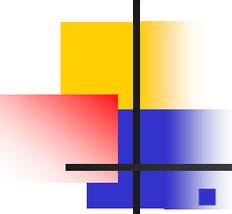




Adjustment problems lead to ...

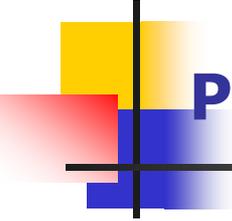
- Depression
- Preoccupation with lost skills or roles
- Lost / changed sense of identity
- Striving for an unrealistic degree of recovery
- Repeated failure leading to loss of confidence
- Limited insight in to difficulties
- Social withdrawal
- Strained family relationships

Tyerman (2008)



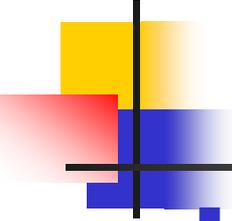
Working closely with the MDT

- Use objective measures to assess mood
 - Hospital & Depression Scale (Zigmond & Snaith)
 - Geriatric Depression Scale (GDS)
 - Stroke Aphasia Depression Questionnaire (SADQ)
- Provide education to the patient and their support network
- Use behavioural / environmental strategies to manage mood
 - Distract the patient from their worrying thoughts by engaging in activity they enjoy
 - Chatting, Watching TV, Going to the day room, etc.
 - Make the environment pleasant
 - E.g. Reduce noise levels
 - Make your interaction positive (reassuring, polite, calm, etc.)
- Acknowledge the patient's distress
 - Validate their feelings – “I can see that you are upset”
 - Normalise their feelings – I understand why you feel upset”
- If mood problems persist and start to interfere with the patient's engagement in rehab - refer them to Psychology



Psychological interventions for mood management

- Behavioural therapy (ABA)
- Cognitive-Behavioural Therapy
- Solution Focused Therapy
- Systemic Therapy
- Motivational Interviewing

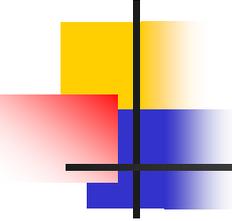


Common behavioural difficulties after Stroke

- Dis-inhibition - controlling or restraining behaviour
- Impulsivity - monitoring behaviour and assessing risk
- Agitation – being fidgety, wound up
- Aggression – verbal or physical
- Not eating
- Not sleeping
- Dementia – deterioration of behaviour

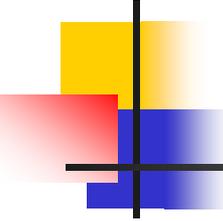
If these problems persist, they can interfere with rehab -:

- Patients could be distracted with things happening around them
- Patients could be too emotionally aroused to concentrate on rehab
- Patients maybe fatigued or lack energy to engage in rehab
- Dementia profile is progressive



Working closely with the MDT

- Use objective measures (e.g. ABC Charts) to record behaviour and look for patterns
- Think about why the behaviour may be happening
 - E.g. is the patient trying to communicate something?
- Give the patient explicit and consistent feedback about their behaviour
 - E.g. "It is not appropriate to do this in public"
- You may have to problem solve for them if they are unable to do so
 - E.g. "You can go to the bathroom to do that"
- Use MDT behavioural guidelines to guide you to manage the behaviour: principles of reinforcement
- If Dementia profile, discussion with MDT about discharge planning



Common cognitive difficulties after Stroke

- Initiation & disengaging - starting and stopping an activity
- Concentration - maintaining attention on a task / activity
- Reasoning – problems with decision making & problem solving
- Slower speed of thinking
- Remembering things – names, faces, routines, appointments, routes, etc.
- Planning activities – difficulty with organising and sequencing behaviour in a particular order

Theses problems can interfere with rehab -:

- If problems are not picked up, patients may be experiencing difficulties in a range of other areas in their life
- This could be interpreted as failures by the patient, which could lead to low mood
- This could also be interpreted as laziness or volitional dis-engagement by family who don't understand
- Dementia profile is progressive

Neuropsychological Assessment

- Specialist comprehensive assessment of cognitive functioning
- Main domains assessed -: Attention, Concentration, Memory, Executive Functioning, Language, Visuo-spatial skills, Calculation, Coordination
- Assessment are selected on the of the patients' current abilities
 - Verbal vs non-verbal
 - Coloured versus black & white stimuli
 - Motor versus non-motor
- Results are interpreted according for normative data based on-:
 - Age
 - Gender
 - Ethnicity

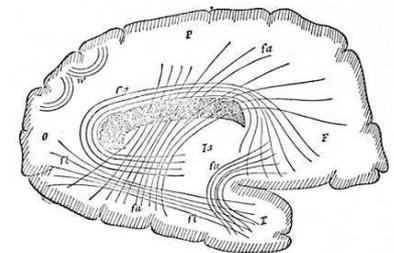
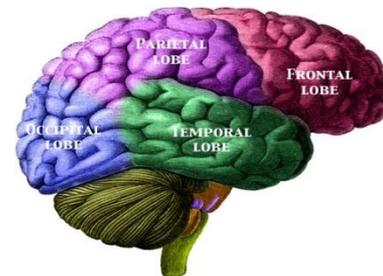
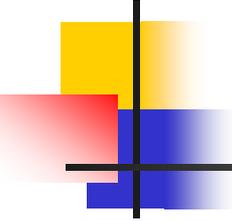


FIG. 02. Systems of longitudinal association fibres. After EDINGER. *F* Frontal *P* parietal, *O* occipital, *T* temporal lobe. *CC* Callosum, *Is* Region of the insula. *Cg* Longitudinal fibres of the callosal gyre (cingulum). *fa* Arcuate fascicle. *f* Longitudinal fascicle. *wa* Arcuate fascicle. *w* Intergyral fibres (fibræ propriae).

Working closely with the MDT

- Compare neuropsychological ax results with
 - Functional assessments
 - MDT reports
 - Observations
- Facilitate cognitive rehabilitation -
 - Orientation Programmes
 - Raising insight through behavioural exper
 - Memory aids (diaries, lists, cues, alarms)
 - Problem Solving

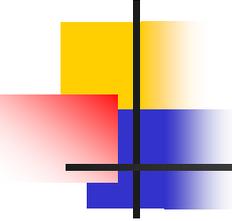




Role of Neuropsychology in Acute Stroke

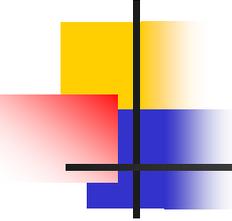
Early Psychology intervention is helpful in -:

- Clarifying diagnostic issues
- Establishing a holistic understanding of the patients current situation / problem (formulation)
- Facilitating long term adjustment
- Acceptance and developing new sense of identity
- Working towards realistic rehab goals
- Increased insight
- Prevention of secondary mental health problems



Questions?





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