STROKE CASE STUDY WORKSHOP ONE

Student Prompt 1

1. Early Phase:

Mr Smith a 55 year old accountant was admitted to A&E with sudden onset of left sided weakness. He lives with his wife and 2 teenage daughters.

Discuss the management of the acute phase of this patient (0 – 48 hrs)

Consider

- the role of the doctor and nurse in the assessment, diagnoses and treatment of the patient.
- if and when it is appropriate to refer to MDT. (10 mins) (10 mins group discussion)

Priority will be on medical management provided by an expert in stroke

Assessment: complete history and physical exam including a neurological examination

- Aiming to determine any possible underlying cardiovascular causes of the event
- Localisation of the cerebral area likely to have been affected
- Identify any treatable risk factors

As well as normal neurological assessment need to include the following

- Ability to swallow
- Ability to communicate
- Level of physical impairment in relation to mobilisation and moving
- Ability to understand and follow instructions
- Bladder control
- Nutritional status

Transfer to an acute stroke unit or HDU that provides specialised management

Diagnostic Imaging: CT scan

Required to confirm the diagnoses and determine whether the stroke is haemorrhagic or ischaemic

To determine if the patient is a candidate for thrombolysis or early anticoagulant treatment

Potential treatment options:

- Anti – platelet therapy if a cerebral infarction is diagnosed – Aspirin
- Neurosurgical – decompressive hemicranieectomy if infarct within the MCA territory and meeting other criteria for surgery
- Intracerebral haemorrhage – reverse the effects of anti –coagulation if necessary (prothrombin and Vit K). Monitor for deterioration and neurosurgery if patient develops hydrocephalus
Subarachnoid haemorrhage, sudden headache and altered state of consciousness. Start on oral nimodipine. Referral to neurosurgery, treatment of aneurysm by embolisation or clipping if appropriate.

Cervical arterial dissection – treatment with anticoagulants or antiplatelets

Cerebral venous thrombosis – treatment with anticoagulation

Nursing – Initial assessment to include monitoring of vital signs and neurological assessment especially on the commencement of any drug therapy. Alert medical team if deterioration in neurological status.

Referral to PT, OT, nutrition and SLT within 24-48 hours of admission with full assessments including goal setting to be carried out within 5 working days

**Student Prompt 2**

**2. Rehabilitation Phase:**

CT scan has shown a right MCA ischaemic infarct.

Day 3 - Patient is now medically stable and has been referred to the stroke unit for rehabilitation.

Medical notes state the following:
Weakness and reduced tone of the UL and LL 2/5
Dependant on 2 for transfers
Inattention of the left side
Mild cognitive impairment
Unclear speech - ? moderate dysarthria
Coughing on Liquids

Discuss each of your roles in the management (assessment and treatment) of this patient.

Consider
Areas of assessment that are common to all professions
The different assessment priorities of each professional
The different rehabilitation priorities of each professional, it may help for therapists to outline a typical treatment session

Discuss the issues (and any potential issues) that will require you to communicate together as a MDT.

(25 mins) (10 mins group discussion)

PT – Assessment of impairments - observation, posture, tone, AROM, PROM, sensation, proprioception, coordination, reflexes. Functional assessment to include bed mobility, transfers, sitting and standing balance, gait. Use of objective measures – FIM, MMAS, Berg etc
OT – Assessment of function with emphasis on transfers – bed, toilet and chair.
Assess need for equipment: transfer board; eating equipment.
Assessment and provision of suitable wheelchair.
Assess cognition and perception – impact of left-side neglect on transfers, eating and personal care. Mainly done through observation – too early for standardised measures.
Speak to wife/family regarding patient’s previous functional status, home environment, work history and hobbies and interests.
Psycho-social support to patient and family.

SLT – assessment of swallow: oromotor exam and trial feeds of different consistencies.
Videofluoroscopy / FEES if indicated. Assessment of motor speech through informal probe tasks and perceptual analysis. Elicit patient’s perception of his own speech and consider impact on ease of interaction in other MDT sessions. Screen communication and speak to family about previous communication style and any observed changes.

Medical – Continue to assess secondary risk factors – follow up monitoring of BP, lipids, glucose level. Watch for early complications such as DVT, aspiration pneumonia, UTI, skin breakdown and early signs of reactive depression

Nursing – Use an activity of daily living assessment tool – used to ensure the same things are measured in the same way by the interprofessional team; to monitor self-care, continence and mobility, Aspects covered in this assessment should include monitoring the following: vital signs, neurological assessment, drug management, action swallowing assessment and request special diet if required, monitor continence and elimination, carry out moving and handling assessment, commence fluid balance recordings, estimate tissue viability rating, apply TED stockings, assess level of the patient and families understanding of the situation, instigate initial planning regarding discharge. Documentation of the above is vital so that the care plan is amended as the condition changes.

PT - typical session may include:

Stretches, UL, LL and trunk to maintain ROM and control tone, exercises to recruit muscle activity and strengthen muscles, activities to stimulate balance in sitting and standing, education of patient/family, for example care of the arm and prevention of pain and subluxation of the shoulder. Transfer practice using aids if necessary, gait activities and practice. Physio is aware of inattention and cognitive problems of the patient having spoken to OT.

OT – typical session may include:

Motor: normalising tone and improving balance through purposeful activity. Remediation of cognitive/perceptual deficits through functional activities. Education of patient and family re left sided neglect, positioning of left arm in wheelchair (using lap tray if needed) for prevention of pain and awareness of left side. Practice of functional activities: transfers, dressing, personal care, eating and wheelchair mobility. Arrange a home visit.

SLT – typical session may include:

Swallow: implementation of compensatory strategies or rehabilitative techniques to increase the safety and efficiency of the swallow. Liaise with medical team and dietician.
Remediation of motor speech: tasks aimed at the relevant subsystem(s) affected, structured to be salient and relevant to the patient. Implementation of communication-oriented approaches to ensure that patient is able to communicate successfully in the context of the hospital, despite reduced intelligibility. Communication: functional activities at conversational / discourse level, tasks requiring integration of information and inferencing.

**Medical –**

Daily ward rounds and assessment and treatment of complications as above as they arise. 
Over the initial 2 weeks titration of medications
Eg: anticoag with monitoring of INR
Ace I with monitoring of renal function
Statins with monitoring of LFTs

**Nursing –**

Ongoing care as per assessment. Liaise with medical team regarding any change in status. Liaise with therapists regarding patient’s ability on ward. Monitor patient for adherence with rehabilitation advice and ensure consistency in functional levels – e.g. positioning, transfer and mobility ability on ward. Liaise with patient and families regarding patient’s condition and rehabilitation, instigate initial planning regarding discharge. Common complications that the nurse will need to be aware of are the following: Depression, Deep Vein Thrombosis, Pneumonia, Pressure Ulcers, Urinary tract Infection, Shoulder Pain and Contractures.

**Areas requiring communication/collaboration**

Regular updates on progress so that discharge planning may be initiated. 
Set goals so that all team members are working to similar deadlines.

Examples of medical/therapist communication
  - Inadequate analgesic cover for rehabilitation
  - Patient is drowsy during gym sessions - ? meds review or sleep depravation
  - Development of musculoskeletal pain e.g. shoulder pain
  - Sudden deterioration in neurological status
  - Increase in spasticity – may signal a RTI/UTI for e.g.
  - Calf pain e.g. DVT
  - Depression – poor interaction with therapy
  - Carry over of therapy on ward
  - Seating/positioning advice

**Student Prompt 3**

3. Late Rehabilitation Phase:
The patient has now been receiving rehabilitation for 6 weeks and is progressing well. Discuss how you as a team would plan and arrange his discharge. (10 mins) (10 mins group discussion)

Early planning to aid discharge, should be discussed from the start
Regular MDT meetings - weekly reports from each of the disciplines outlining the patient’s progress and any outstanding issues that may impede discharge.
Aim is to establish whether the patient requires more intensive inpatient rehabilitation or will be ready for dc +/- follow up therapy

PT – Transfers, bed mobility, gait (in and outdoors, aid), balance, stairs, UL function.
Aim for mobility as close to baseline as possible
Report on safety, need for supervision or assistance with gait, balance or transfers
Sessions with family to practice transfers, mobility, RV HEP, education.

OT – Transfers, ADLs, cognition, perceptual difficulties, UL function, mobility.
Report on safety, need for supervision or assistance on ADLs, discuss how any cognitive or perceptual problems may impact on function and safety. Homevisit (may be in conjunction with PT and community OT, if needed) to identify what needs to be done prior to d/c. Equipment, adaptations to home, feedback to other disciplines re further practice (i.e. may be unsafe on home stairs or need to climb access step with no rail).
Sessions with family. Refer to out-patient service.

SLT – ensure safety of swallow and report on independence / need for supervision in implementing the relevant techniques consistently. Session with family, education about changes in communication and strategies to facilitate successful interaction. Refer to out-patient service.

Doctors – review medications, contact with GP, arrange outstanding investigations, arrange clinic review and follow up, counselling on risk factors to decrease risk of reoccurrence

Nursing – act as link between pt, family and medical team. Review need for support at home in terms of ADLs, feeding, continence care. Counsel on medication and side effects. Handover to PHN as appropriate. Arrange follow up appts.

All – review of home situation, lives alone or has family
Return to work – review job requirements and discuss whether this is a likely outcome.
Review outcome from home visit.
May benefit from weekend leave to prepare family and patient.
Arrange follow up services – 55 year old therefore aim to maximise potential 
Driving, sport, social pursuits.

Outline the other professionals likely to be involved
Social work
Human nutrition
Psychologist