

# ACUTE ISCHAEMIC STROKE (INPATIENT)

**MODULE:** ACUTE CARE

**TARGET:** FY1 & FY2 TRAINEES AND FINAL YEAR MEDICAL STUDENTS

**BACKGROUND:**

Stroke is a major health problem in the UK accounting for approximately 11% of all deaths. Whilst most people survive a first stroke, many have significant residual disability. There is good evidence that early diagnosis and thrombolysis significantly reduce morbidity. FY trainees should recognise the symptoms and clinical signs of acute ischaemic stroke and implement the care that leads to best outcomes for stroke patients.

## RELEVANT AREAS OF THE FOUNDATION PROGRAMME CURRICULUM

<p><b>1</b> <b>Professionalism</b></p>	<p><b>1.4 Team Working:</b></p> <ul style="list-style-type: none"> <li>• Demonstrates clear and effective communication within the team</li> </ul> <p><b>1.5 Leadership:</b></p> <ul style="list-style-type: none"> <li>• FY2 demonstrates extended leadership role by making decisions and dealing with complex situations across a greater range of clinical and non-clinical situations</li> </ul>
<p><b>7</b> <b>Good clinical care</b></p>	<p><b>7.5 Safe prescribing</b></p> <ul style="list-style-type: none"> <li>• Prescribes drugs and treatments appropriately, clearly and unambiguously in accordance with Good Practice in Prescribing Medicines (GMC, 2008)</li> <li>• Uses the BNF plus pharmacy and computer-based prescribing-decision support to access information about drug treatments, including drug interactions</li> <li>• Performs dosage calculations correctly and verifies that the dose is of the right order</li> <li>• Chooses appropriate intravenous fluids as vehicles for intravenous drugs and calculates the correct volume and flow rate</li> <li>• Prescribes oxygen appropriately including to patients with the risk of carbon dioxide retention</li> <li>• Relates prescribing activity to available prescribing guidelines / audit data eg antibiotic usage</li> </ul> <p><b>7.7 Infection control and hygiene</b></p> <ul style="list-style-type: none"> <li>• Demonstrates correct techniques for hand hygiene with hand gel and with soap and water</li> <li>• Takes appropriate microbiological specimens in an timely fashion</li> <li>• Follows local guidelines / protocols for antibiotic prescribing</li> </ul> <p><b>7.9 Interface with different specialties and with other professionals</b></p> <ul style="list-style-type: none"> <li>• Understands the importance of effective communication with colleagues in other disciplines</li> </ul>

<p><b>8 Recognition and management of the acutely ill patient</b></p>	<p><b>8.1 Promptly assesses the acutely ill, collapsed or unconscious patient</b></p> <ul style="list-style-type: none"> <li>• Uses Airway, Breathing, Circulation, Disability, Exposure (ABCDE) approach to assessing the acutely unwell or collapsed patients</li> <li>• Uses the GCS or Alert, Voice, Pain, Unresponsive (AVPU) to quantify conscious level</li> <li>• Investigates and analyses abnormal physiological results in the context of the clinical scenario to elicit and treat cause</li> <li>• Uses monitoring (including blood glucose) to inform the clinical assessment</li> <li>• Asks patients and staff appropriate questions to prioritise care</li> <li>• Seeks senior help with the further management of acutely unwell patients both promptly and appropriately</li> <li>• Summarises and communicates findings to colleagues succinctly</li> <li>• Appropriately communicates with relatives/friends and offers support</li> </ul> <p><b>8.2 Responds to acutely abnormal physiology</b></p> <ul style="list-style-type: none"> <li>• Formulates treatment plan in response to acutely abnormal physiology taking into account other co-morbidities and long-term conditions</li> <li>• Administers and prescribes oxygen, fluids and antimicrobials as appropriate (see Good Clinical Care: Safe Prescribing and Infection Control)</li> <li>• Recognises when arterial blood gas sampling is indicated, identifies abnormal results, interprets results correctly and seeks senior advice</li> <li>• Plans appropriate action to try to prevent deterioration in vital signs</li> <li>• Reassesses ill patients appropriately after starting treatment</li> <li>• Recognises the indicators for intensive care unit review when physiology abnormal</li> </ul> <p><b>8.3 Manages patients with impaired consciousness, including seizures</b></p> <ul style="list-style-type: none"> <li>• Assesses conscious level (GCS or AVPU)</li> <li>• Treats ongoing seizures</li> <li>• Recognises causes of impaired consciousness and seizures and seeks to correct them</li> <li>• Recognises the potential for airway and respiratory compromise in the unconscious patient (including indications for intubation)</li> <li>• Understands the importance of supportive management in impaired consciousness</li> <li>• Seeks senior help for patients with impaired consciousness in an appropriate and timely way</li> </ul>
<p><b>11 Investigations</b></p>	<p><b>11.1 Investigations</b></p> <ul style="list-style-type: none"> <li>• Requests investigations appropriate for patients' needs in accordance with local and national guidance to optimise the use of resources</li> <li>• Seeks out, records and relays results in a timely manner</li> <li>• Plans/organises appropriate further investigations to aid diagnosis and/or inform the management plan</li> <li>• Provides concise, accurate and relevant information and understands the diagnostic question when requesting investigations</li> <li>• Understands what common tests (Table 1) and procedures entail, the diagnostic limitations and contraindications, in order to ensure correct and relevant referrals/requests</li> <li>• Interprets the results correctly within the context of the particular patient/presentation e.g. plain radiography in a common acute condition</li> <li>• Prioritises importance of investigation results</li> </ul>

## INFORMATION FOR FACULTY

### LEARNING OBJECTIVES:

- ABCDE assessment and immediate management of an inpatient with an acute ischaemic stroke

### SCENE INFORMATION:

- Location: Urology Ward
- Expected duration of scenario: 15 mins  
Expected duration of debriefing: 30 mins

### EQUIPMENT & CONSUMABLES

- Mannequin: On hospital bed with IV access
- Drug chart, ward obs, blood results
- Stocked airway trolley  
(Specifically: Airway adjuncts (OPA, NPA))
- O2 and selection of masks incl. NRB
- Monitoring equipment (SpO2, ECG, NIBP)
- IV fluid and giving sets

### PERSONS REQUIRED

FY Trainee to lead scenario  
Ward staff member (Nurse, FY, Medical student)  
Medical Registrar (If requested)  
Stroke Team member (If requested)  
Patient's son/daughter

### PARTICIPANT BRIEFING: (TO BE READ ALOUD TO PARTICIPANT)

1. Scene-setting: Recognition and initial management of the acutely unwell patient are essential skills to develop during FY training. Today we would like one of you to assess a patient on the medical ward. It is the weekend and you are on call. The ward nurse will ask you to review a patient. Please assess the patient methodically and treat the problems / symptoms that you find.
2. Assistance: An assistant will be present as the scenario begins (faculty will tell you who this is and what experience they have). If other (appropriate) help is needed at any stage, ask for it (the faculty will let you know how to request it).
3. The scenario will run until a natural conclusion, after which we will regroup to discuss the scenario and any related subjects that the group raises. This is not a test of the person who participates in the scenario and they will not be judged in any way on their performance.

### 'VOICE OF MANIKIN' BRIEFING:

You are Henry (Harriet) Johnson, a 74 year old man (woman) being treated with intravenous antibiotics for "a kidney infection". You have been on the ward for 3 days and this morning you were starting to feel better.

30 minutes ago you started to slur your speech and have difficulty moving your left arm. You have not noticed any change in your vision, or in the sensation in your face, legs or arms. You have not tried to walk because you get tangled up in your catheter if a nurse isn't free to come with you.

You have diabetes and high blood pressure and take metformin and blood pressure tablets. You are not allergic to anything. No one in your family has had a stroke. If asked, say you have had some palpitations since admission which you thought were due to anxiety. You are married, you are a non-smoker and drink 5- 10 units of alcohol per week.

You are very anxious about the sudden problem. You've never had any trouble with your heart before this. You have not had any falls, or any recent surgery. If your son/daughter is present, you ask for them to stay while you are assessed by the doctor.

#### IN SCENARIO BRIEFING:

**Ward nurse:** You are looking after Henry (Harriet) Johnson, a 74yo admitted with urinary sepsis, on intravenous antibiotics. He/she is normally well and lives independently, has type 2 diabetes and hypertension. In the past 30 minutes you have noticed slurred speech and that he/she does not appear to be moving his/her left arm. Please ask the FY doctor to go and assess the patient, the admission notes and drug chart are available.

**Patient's Son or Daughter (if present):** You have been sitting with your father/mother on the ward for about an hour. He/she had no problems when you arrived, but over the last 30 minutes you've noticed slurred speech, and that he/she can't move his/her left arm. You are very worried so you have called the nurse. You know your father/mother has high blood pressure and type 2 diabetes, but is normally active and well. You thought your father/mother was recovering well and this sudden deterioration really concerns you.

*Easy:* You are concerned, but helpful. You can mention that you saw the FAST advert on TV and it reminds you of what is happening now.

*Normal difficulty:* You are concerned and upset, you pace around the room, constantly asking questions, such as: What's happening now? Why aren't you doing anything? What's wrong with my father/mother? You can give a full history if asked. You will not leave the room if asked to because your father/mother has asked you to remain with them.

**Radiographer:** You are asked to perform a CT brain urgently. Ask for an indication, how can the patient travel, how urgent is the scan, can it be done tomorrow, does the patient need medical personnel to escort them, do they need a bed, oxygen, drip? Book the scan if the participant answers all your questions. If they don't answer them, ask for a consultant referral to the radiologist on-call.

**Acute stroke team member:** Respond via phone if participant tries to contact you. Take an SBAR referral, then -

*Easy:* Say you will be there within 5 minutes. When you arrive, organise a CT brain and contact the Stroke Consultant.

*Normal difficulty:* Say you are attending another patient in A&E Resus and will be 15 minutes, but that the participant should organise for an urgent CT brain and refer to the Acute Stroke Consultant.

**Medical Registrar:** If called, ask the participant to organise a CT brain and call the stroke team. If asked about the fast AF – advise to load with IV digoxin. If asked say you will be able to come to see the patient in about 10-15 minutes as you are with another sick patient.

**Acute Stroke Consultant:** You ask for the CT brain to be organised and ask to be rung again as soon as it is done. If the participant has been asked to get a consultant to request the CT, then say you will do it. Also say you are on your way to see the patient.

#### ADDITIONAL INFORMATION - DRUG CHART

Ertapenem IV (or as per trust guidelines for urinary sepsis)

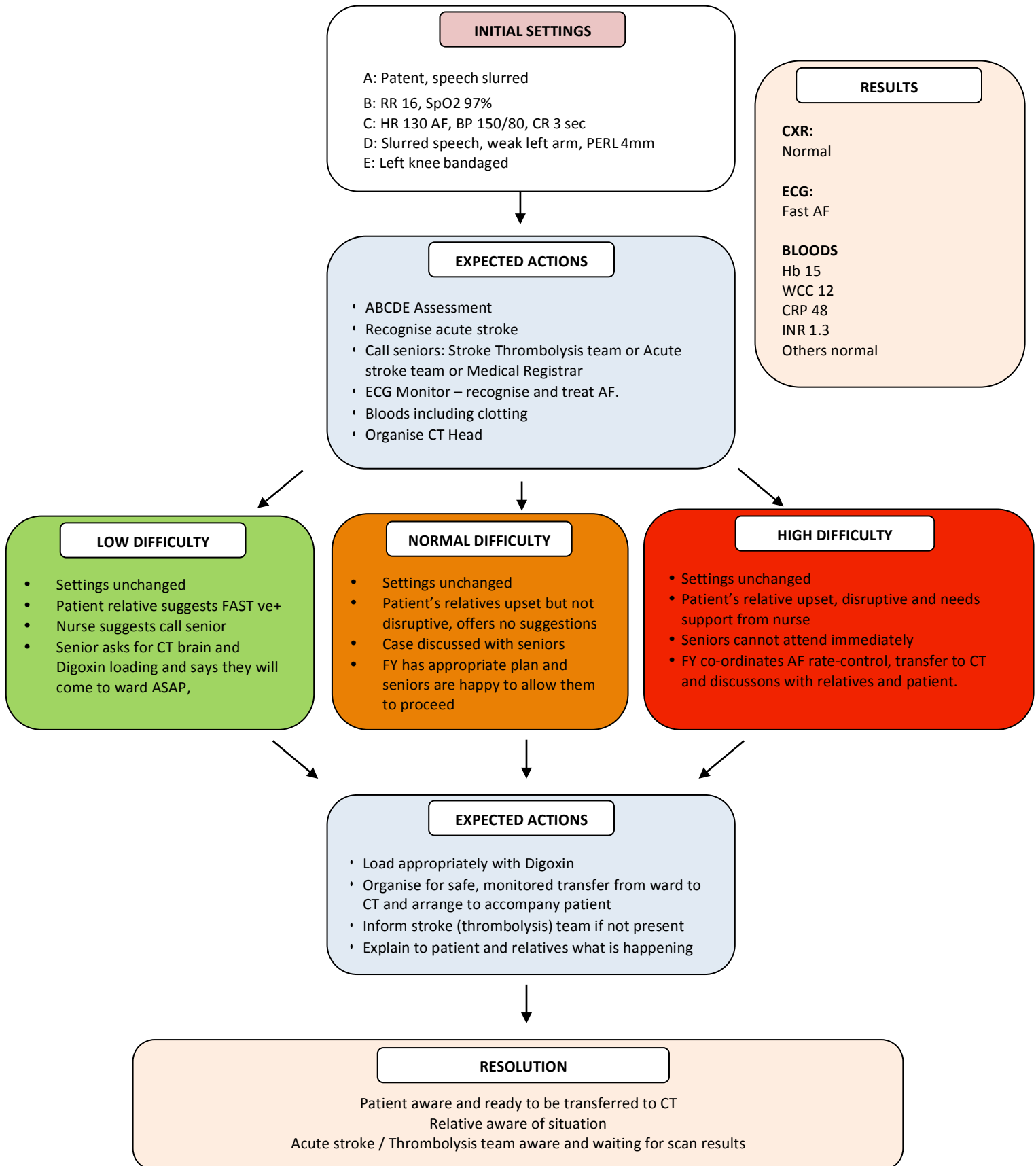
Metformin 500mg bd PO

Amlodipine 5mg od PO

Dalteparin 5000units od SC

NKDA

CONDUCT OF SCENARIO



## DEBRIEFING

### POINTS FOR FURTHER DISCUSSION:

**Act FAST:** The Stroke: Act F.A.S.T. awareness campaign aims to educate healthcare professionals and the public on (1) the signs of stroke and (2) that prompt emergency treatment can reduce the risk of death and disability. It encourages people to feel confident to phone 999 for an ambulance on detecting any single sign of stroke. This emergency action is just as important for TIAs.

The **ROSIER** scale stroke assessment (Recognition of Stroke in the Emergency Room) may be used in Emergency Departments and in-patient settings, though the paperwork may not be immediately available on every inpatient ward.

Does your hospital have an acute stroke pathway? If so, where can you get a copy and how do you use it?

How to deal with distressed patient and relatives in acute situations.

When to accompany a patient to CT scan.

### DEBRIEFING RESOURCES

1. NICE Clinical Guideline 68: Stroke (July 2008) available at <http://www.nice.org.uk/nicemedia/live/12018/41331/41331.pdf>
2. Act FAST information leaflet available at: [http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/documents/digitalasset/dh\\_094245.pdf](http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_094245.pdf)

**INFORMATION FOR PARTICIPANTS**

**KEY POINTS:**

Stroke is a major health problem in the UK accounting for approximately 11% of all deaths. Although most people survive a first stroke, many are left with significant disabilities. Effective interventions are now available to treat acute strokes but must be started soon after the onset of symptoms. Healthcare professionals should recognise the symptoms and signs of acute strokes and know how to arrange the appropriate investigation and treatment.

CT brain will exclude an acute haemorrhagic stroke and must be performed before a patient can be considered for thrombolysis or anti-thrombotic drugs. Specialist acute stroke centres offer thrombolysis. If your patient is not in a thrombolysis centre, speak to your seniors about whether the patient can/should be transferred.

It is a frightening time for the patient and their family. Don't overlook them – explain what is happening, what investigations and treatments are proposed and give them time to ask questions.

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**PARTICIPANT REFLECTION:**

What have you learnt from this experience? (Please try to list 3 things)

How will your practice now change?

What other actions will you now take to meet any identified learning needs?

**PARTICIPANT FEEDBACK**

Date of training session:.....

Profession and grade:.....

What role(s) did you play in the scenario? (Please tick)

Primary/Initial Participant	
Secondary Participant (e.g. 'Call for Help' responder)	
Other health care professional (e.g. nurse/ODP)	
Other role (please specify):	
Observer	

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I found this scenario useful					
I understand more about the scenario subject					
I have more confidence to deal with this scenario					
The material covered was relevant to me					

Please write down one thing you have learned today, and that you will use in your clinical practice.

How could this scenario be improved for future participants?  
 (This is especially important if you have ticked anything in the disagree/strongly disagree box)



**FACULTY DEBRIEF – TO BE COMPLETED BY FACULTY TEAM**

What went particularly well during this scenario?

What did not go well, or as well as planned?

Why didn't it go well?

How could the scenario be improved for future participants?