

M2 Evaluation Test

1.

Question1

A patient presents with sudden deviation of the labial commissure towards the left side (she has a right side facial palsy), right arm and leg weakness, and she says incoherent words and keeps repeating “I don’t know”. What is the most likely location of the stroke?

- Left hemisphere cortical stroke
- Right hemisphere cortical stroke
- Right lacunar stroke
- Left lacunar stroke
- Vertebrobasilar stroke

Correct

Involvement of the left cerebral hemisphere can produce contralateral weakness on the right side of the body (including right facial paralysis, which is why the labial commissure appears to deviate towards the left when the patient smiles), and aphasia or altered language. In lacunar strokes, cortical symptoms such as aphasia are not seen. In addition to the symptoms described in this patients, left cortical strokes can cause other symptoms as loss of right visual field (the same side as the weakness) and deviation of the eyes and head towards the left (the opposite side from the weakness).

2.

Question 2

A patient presents with sudden onset deviation of the labial commissure towards the right side (he has left side facial palsy), left arm and leg weakness, and gaze and head deviation towards to right. He is not aware of what is happening to him (says that he can lift his arms without difficulty) and does not recognise his left arm when shown it in front of his face (says this arm is not his). What is the most likely location of the stroke?

- Right hemisphere cortical stroke
- Right lacunar stroke
- Left hemisphere cortical stroke
- Left lacunar stroke
- Vertebro-basilar stroke

Correct

When the right cerebral hemisphere is affected, it produces contralateral weakness (on the left side of the body) and agnosia, which means a lack of awareness of the half of the body that is affected (the

left) and lack of awareness of the deficit. In addition, it can produce deviation of the eyes and head towards the right (the opposite side from the weakness).

3.

Question 3

A patient who was previously well presents with sudden-onset dizziness, nausea and vomiting, double vision and unstable walking, unable to coordinate her steps. What do you suspect?

- I suspect subarachnoid haemorrhage
- It could be a left hemisphere stroke
- Alcohol intoxication is most likely
- It could be a right hemisphere stroke
- It could be a vertebralbasilar stroke

Correct

The typical symptoms of vertebra-basilar stroke are double vision, feelings of vertigo or dizziness, dysarthria, ataxia (unstable gait) and dysmetria (lack of coordination in arms and legs). In severe cases there can be drowsiness and reduced level of consciousness. Given the sudden onset, we should suspect an acute stroke rather than alcohol intoxication, although this possibility is in the differential diagnosis. The symptoms described are not typical of a right hemisphere stroke (left-sided weakness and agnosia), left hemisphere stroke (right-sided weakness and aphasia) or subarachnoid haemorrhage (sudden, severe headache often with reduced level of consciousness).

4.

Question 4

A patient has left arm and leg weakness, but is not aware of this, and if you ask him if he can move his arms or clap he says “yes” and makes a clapping motion, but without moving the left arm. What sign is this patient showing?

- Diplopia
- Agnosia
- Hemianopia
- Aphasia
- Dysarthria

Correct

Agnosia is the lack of awareness of the deficit (anosognosia) and lack of recognition of one half of one's own body (asomatognosia). Aphasia is abnormal language content, with difficulty expressing and/or understanding words correctly. Dysarthria is difficulty pronouncing or articulating words. Hemianopia is loss of half the visual field. Diplopia is double vision of objects.

5.

Question 5

Which of the following symptoms is not typical of stroke?

- Weakness of the arm and leg on one side of the body (right or left)
- **Severe headache**
- Deviation of the labial commissure
- Speech problems

Correct

The symptoms of stroke are focal neurology or involvement of one part of brain function, such as language, or arm, leg, or face motor function. Headache is not a typical symptom of stroke, but it can be a symptom of subarachnoid haemorrhage.

6.

Question 6

Regarding posterior strokes, select the INCORRECT option:

- They are severe strokes and have a high mortality
- They affect brainstem and cerebellar structures
- **They are usually haemorrhagic rather than ischemic**
- The typical symptoms are vertigo, double vision, unstable gait, and sometimes altered level of consciousness

Correct

Posterior strokes (brainstem or cerebellum) typically produce vertigo, double vision, unstable gait and sometimes altered level of consciousness. Posterior stroke is a severe condition related with a high mortality. Ischemic strokes are more common than haemorrhagic strokes, both for posterior or anterior territory.

7.

Question 7

Select the correct answer regarding stroke topography:

- Lacunar strokes occur in smaller arteries in the deep part of the brain and usually produce severe symptoms such as reduced level of consciousness, head or gaze deviation, or hemiplegia
- **Lacunar strokes occur in smaller arteries in the deep part of the brain and do not produce symptoms of cerebral cortex involvement such as aphasia, agnosia, hemianopia or head or gaze deviation**
- Hemispheric stroke is due to involvement of the brainstem or cerebellum

- Lacunar stroke is the most severe type of stroke and is produced by large cerebral vessel occlusion

Correct

Lacunar strokes are produced by obstruction of one of the smaller arteries located in the deep area of the brain, which means that the sensory and motor fibres are affected. They are less severe than cortical strokes.

A total cortical or hemispheric stroke is caused by obstruction of a larger artery, affecting the cerebral cortex, which is why, unlike lacunar strokes, they are more severe and produce cortical symptoms such as aphasia, language disorders, agnosia, visual field defects and head or gaze deviation.

8.

Question 8

Which of the following is true regarding transient ischaemic attacks or TIAs:

- They refer to strokes that resolve within one week
- They are mild strokes and do not require urgent medical attention
- Most patients who have a TIA immediately go to the emergency department
- They are a warning sign because the risk of a stroke in the subsequent hours and days is high, between 5%-10%

Correct

A transient ischaemic attack is defined as a neurological deficit of vascular origin that lasts < 24 h (usually < 1 h) with no lesion seen on neuroimaging. They often occur in the days before a stroke and are a warning signal because the risk of recurrence is high. Many patients do not feel alarmed and do not see a doctor.

9.

Question 9

Regarding stroke treatment:

- The most important thing is to take the time required to make a precise diagnosis and locate the region of the brain affected before starting any treatment
- Appropriate treatment should be started as soon as possible to minimise neurological sequelae, as the extent of damage increases with time
- Thrombolysis should be given as soon as possible, even before doing CT head
- The size of the cerebral lesion is at its maximum from the start and there is no treatment to avoid this

Correct

The treatment of stroke is time-dependent: the brain lesion progresses and grows over the first few hours from the start of the stroke, so the sooner the blood flow is re-established, the less brain damage there will be and the fewer neurological sequelae. For every 30 minutes' delay in treatment, the patient loses 1 month of healthy life. The initial diagnosis should be made quickly, without delay and without wasting time on a highly-detailed examination. Thrombolysis is useful for ischemic strokes (with flow obstruction) but not for haemorrhagic strokes, so before starting this a CT brain must be done to rule out haemorrhage.

10.

Question 10

A patient is transferred to the hospital with an acute stroke that started 4 hours prior. Before giving thrombolysis to dissolve the clot that is obstructing the cerebral artery you must (mark the INCORRECT answer):

- We should review the clinical history and ask relatives if there are any contraindications such as recent surgery, recent episodes of bleeding, or clotting abnormalities
- Perform neuroimaging to rule out cerebral haemorrhage
- **Thrombolysis cannot be given because the time since onset is greater than 3 hours**
- The treatment with rtPA is given intravenously, with a bolus and then an infusion over 1 hour

Correct

Thrombolysis with intravenous rtPA is indicated in patients with ischaemic stroke within the first 4.5 hours after the onset of symptoms.

11.

Question 11

The treatment of stroke with thrombectomy using endovascular catheters is indicated when:

- **All the answers are indications for endovascular treatment**
- There is large vessel occlusion that does not dissolve with thrombolysis
- There is large vessel occlusion and thrombolysis cannot be given due to a contraindication
- There is basilar artery occlusion

Correct

Thrombectomy is an option when there is large vessel occlusion that can be reached with a catheter. This may be in the carotid, middle cerebral, or basilar arteries. Thrombectomy is indicated as an additional treatment to thrombolysis, which often does not dissolve the clot, or when thrombolytics are contraindicated, for example in patients who have had recent surgery, are taking anticoagulation, have platelet abnormalities, or more than 4.5 hours after onset.

12.

Question 12

A patient arrives at hospital with a severe acute stroke, with right hemiplegia and aphasia that began 3 hours ago. On CT head no haemorrhage is seen and there is a thrombus in the middle cerebral artery, one of the main cerebral arteries. Thrombolysis is started with rtPA as the first line, but the patient does not improve and the clot does not dissolve. What additional treatment is indicated next?

- A second dose of intravenous rtPA
- Decompressive craniectomy
- Intravenous heparin
- Endovascular thrombectomy

Correct

Thrombectomy is an option when there is large vessel occlusion and is indicated as an additional treatment to thrombolysis with rtPA, which often does not dissolve the clot, or when thrombolytics are contraindicated. Heparin is a medication that is sometimes used as prevention against further strokes, after the acute phase. Craniectomy is an invasive surgery that can be considered when a very extensive stroke develops with lots of oedema that puts the patient's life at risk. A second dose of rtPA is never given because it confers a high risk of haemorrhage.

13.

Question 13

Regarding endovascular treatment of ischaemic strokes, mark the INCORRECT answer:

- Clot extraction is achieved in approximately 80% of cases
- Neurovascular imaging is usually performed first, in the form of CT-angiography or MRI of the brain to locate the exact position of the thrombus and get information on the state of the cerebral tissue involved
- It involves introducing a catheter into the artery up to the point where the obstruction is and using different devices to remove the clot
- It is a widely-available technique in most hospitals

Correct

Endovascular treatment requires a highly-specialised team of professionals and assistants and is only available in some hospitals, known as tertiary stroke centres. It is exactly this factor that limits access to tertiary centres for people who live in rural or remote areas.

14.

Question 14

In all types of stroke, whether ischemic or haemorrhagic, one of the main treatments that has been shown to improve survival and neurological outcomes is:

- Neurosurgical treatment

- Thrombolysis with intravenous rtPA
- Neuroprotective drugs and hypothermia
- Activation of the Stroke Code, early specialised treatment and admission to a stroke unit

Correct

Activation of the Stroke Code, which allows early specialised care, and admission to a stroke unit are the specific care measures that have been demonstrated to improve clinical outcome and reduce mortality, in both ischaemic and haemorrhagic strokes. Thrombolysis is contraindicated in patients with haemorrhage. Neurosurgical intervention is indicated only in certain cases. To date, no clear clinical benefits have been demonstrated from neuroprotective drugs or hypothermia.

15.

Question 15

In haemorrhagic strokes, neurosurgical intervention is indicated in the following situations except one. Mark the EXCEPTION:

- If the haemorrhage is small and located deep in the brain, but is located on the left side and affecting language, we proceed to evacuation of the haematoma
- If the haemorrhage spreads into the cerebral ventricles and causes dilatation of the ventricles then a ventricular drain is inserted
- If the haemorrhage is located near the skull and shown to be growing in size, there is raised intracranial pressure and neurological deterioration, then evacuation of the haematoma is performed
- If the haemorrhage is located in the cerebellum and causing mass effect on the brainstem then a posterior fossa craniectomy is performed

Correct

Surgical treatment of haemorrhage is performed when the lesion causes oedema and inflammation or is growing, causing clinical deterioration or putting the patient's life at risk. It is not indicated in small haemorrhages that are clinically stable, and the indication for surgery does not depend on the haemorrhage being in the right or left side of the brain.

M3 Evaluation test

1.

Question 1

All of the following answers EXCEPT ONE (mark this option) are strategies that are currently being developed to improve the prehospital care of patients with stroke:

- Implementation of stroke code protocols with simple neurological scales to improve clinical assessment of patients
- Prehospital telemedicine systems to remotely connect to a neurologist
- Precise diagnosis to differentiate ischaemic and haemorrhagic stroke using electroencephalogram
- The use of ambulances equipped with neuroimaging to allow thrombolysis to be started earlier

Correct

Electroencephalogram (EEG) is a technique used in epilepsy, and does not allow differentiation between ischaemic and haemorrhagic stroke. The other options are strategies that have been piloted and are now being developed to optimise the prehospital management of acute stroke.

2.

Question 2

What medication would you give to a patient with suspected stroke during their ambulance transfer to the corresponding stroke centre?

- Aspirin (acetylsalicylic acid)
- None, except oxygen if required and dextrose infusion if they have hypoglycaemia.
- Magnesium sulphate as a neuroprotector
- Thrombolysis with IV rtPA if the time since onset is less than 4.5 hours
- Intravenous heparin

Correct

If a stroke is suspected in the prehospital setting, antiplatelets and anticoagulants (aspirin, heparin, thrombolysis) should never be given until a CT head is performed to rule out haemorrhagic stroke. Although several clinical trials have been performed with different drugs, so far no neuroprotective drug has been demonstrated to be beneficial in the prehospital setting. The patient's vital signs should be stabilised, oxygen should be given to keep saturation >95%, hypoglycaemia treated if present and vomiting avoided.

3.

Question 3

The professionals from a mobile unit (ambulance) go to the home of a 60-year-old patient with right hemiparesis and aphasia started of 1 hour ago. Which of the following actions is correct?

- They should give the patient 300 mg of aspirin (acetylsalicylic acid) and transfer the patient as a priority to the closest stroke centre.
- It is essential to do an ECG to rule out an acute myocardial infarction associated with the stroke.
- They should activate the stroke code, take vital signs and capillary blood glucose to rule out hypoglycaemia, and transfer the patient as a priority to the closest stroke centre, with the patients positioned supine at 30 degrees.
- They should activate the stroke code and transfer the patient as a priority to the closest stroke centre, in a sitting position to avoid bronchoaspiration of vomit.

Correct

If a stroke is suspected in the prehospital setting, antiplatelets or anticoagulants should never be given until a head CT scan is performed to rule out haemorrhagic stroke. The main priority is to stabilise the patient, monitor vital signs including blood glucose, treat any hypoglycaemia if present, and activate the stroke code. The transfer should not be delayed to do an ECG unless there is clinical suspicion that the patient is having an acute myocardial event.

4.

Question 4

Mark the correct answer regarding the Stroke Code systems:

- They allow the early diagnosis and treatment of acute stroke patients by transferring them to the appropriate hospital together with a closed coordination between prehospital and intra-hospital professionals.
- The fastest way to activate the stroke code is for the patient or relatives to go to their general health centre or primary care centre and from there inform the emergency medical services.
- It should only be activated for ischaemic strokes, not for haemorrhagic strokes.
- The Stroke Code can only activated from a hospital, to allow the transfer between hospitals of those patients with the most severe strokes.

Correct

The stroke code can be activated from any healthcare setting (emergency services, health centres, hospitals) if a stroke is suspected, whether ischaemic or haemorrhagic. In fact, until the patient arrives at the receiving hospital, they cannot undergo a CT scan to determine if it is an ischaemic or haemorrhagic stroke. The fastest route is for the patient or relative to call the emergency services directly, thus avoiding any transfer between hospitals or healthcare centres.

5.

Question 5

Tools such as RAPID, the Cincinnati scale or FAST help identify patients with acute stroke. To evaluate the patient, you must ask them to perform 3 different actions. Mark the INCORRECT answer:

- Smile
- Make a fist
- Raise their arms

Correct

FAST is the acronym for Face, Arm, Speech, Time.

The Cincinnati scale assesses facial weakness, arm strength and speech.

RAPID is the acronym in Catalan for Smile (Rigui), Arm raise (Aixequi el braç), Speech (Parli), Quick (De pressa), Stroke (Ictus).

If there is one or more of the symptoms from these scales, you should suspect a stroke. These tools help identify most patients with stroke. Making a fist is not included in these stroke detection tools.

6.

Question 6

The following symptoms EXCEPT ONE should make us suspect an acute stroke and therefore activate the Stroke Code. Mark the symptom that on its own would not require activation of the Stroke Code:

- Weakness on one side of the body
- Difficulty saying the right words
- Severe headache
- Deviation of the labial commissure

Correct

A sudden severe headache can suggest the presence of a cerebral haemorrhage, but it is not one of the typical symptoms of stroke. The other answers are focal neurology and should make us suspect a stroke.

7.

Question 7

In which of these situations would you NOT activate the Stroke Code?

- A patient with very mild right-sided weakness
- A patient who takes anticoagulants
- A patient who needs help to get in and out of bed and get washed
- A patient with symptoms that began 4 hours ago

Correct

One of the criteria for activating the Stroke Code is that the patient should be previously independent in basic activities of daily living, that is, able to walk, get washed and get dressed without help from others. Although it depends on local protocol, in most cases the other situations would not contraindicate activation of the stroke code.

8.

Question 8

A 55-year-old patient who works as a gardener. While working, he experienced sudden-onset dizziness, vomiting, double vision and difficulty walking (“as if I were drunk”). He rang the emergency services himself. When you see him, you find a patient who is generally unwell and lying on the floor. He has vomited, has abnormal eye movements and cannot walk without assistance (ataxic, walks with the legs wide apart and with a lot of instability). What do you suspect?

- It looks like a vertebrobasilar stroke, and I would activate the Stroke Code
- It looks like vertigo, so I would not activate the Stroke Code
- It looks like a transient ischaemic attack, so I would not activate the Stroke Code
- It looks like a lacunar stroke, and I would activate the Stroke Code

Correct

Such a sudden onset of double vision and severe ataxia makes us think of a posterior territory stroke and we should consider activation of the Stroke Code. In some cases of stroke, especially if the posterior territory is affected, the symptoms and signs are not the most typical ones (as facial asymmetry, limb weakness or speech impairment) and the patient may have double vision, dizziness, unstable gait or ataxia, dysarthria, and even reduced consciousness.

9.

Question 9

A 45-year-old foreign man has been out all night with his friends. At around 11am, his friends report that he is dizzy, not speaking properly and is walking unstably. When you arrive, you find a drowsy patient who has vomited, with a clear facial droop and dysarthria. BP is normal, blood glucose is 60 mg/dL. It is very difficult to understand what he is saying. You ask the patient to raise his arms and you see a clear asymmetrical weakness of the left arm. What do you suspect?

- Hypoglycaemia, so I would not activate the Stroke Code
- Alcohol intoxication, so I would not activate the Stroke Code
- An epileptic seizure, so I would not activate the Stroke Code
- It is a possible stroke and I would activate the Stroke Code
- Vertigo, so I would not activate the Stroke Code

Correct

The stroke code should be activated, because there is focal neurology. After an epileptic seizure there may be focal neurology and confusion, but it would not be the first suspicion because there is no report of abnormal movements. Vertigo does not present as a speech disorder or limb weakness. Alcohol intoxication can sometimes be confused with stroke, because it can cause confusion, abnormal gait and altered speech, but in this case there are also focal motor signs with facial and arm weakness.

10.

Question 10

A 60-year-old man with a past history of cardiac arrhythmia, independent in basic activities of daily living, went to bed the previous night with no symptoms. He normally wakes up at 6am to go to work. His son found him at 9am on the floor with right-sided weakness. He called the ambulance and they arrive at the house at 11am. The patient is not producing speech or obeying commands and has severe right-sided facial, arm and leg weakness.

How long is it since the stroke started?

- 2 hours
- **Unknown/Wake-up stroke**
- 5 hours

Correct

11.

Question 11

A 60-year-old man with a past history of cardiac arrhythmia, independent in basic activities of daily living, went to bed the previous night with no symptoms. He normally wakes up at 6am to go to work. His son found him at 9am on the floor with right-sided weakness. He called the ambulance and they arrive at the house at 11am. The patient is not producing speech or obeying commands and has severe right-sided facial, arm and leg weakness.

Where do you think the lesion is?

- Right hemisphere
- **Left hemisphere**
- Vertebrobasilar

Correct

This is a left hemispheric stroke (right-sided weakness and aphasia) with unknown onset as the symptoms started during the night and the family noticed them once he woke up.

12.

Question 12

A 60-year-old man with a past history of cardiac arrhythmia, independent in basic activities of daily living, went to bed the previous night with no symptoms. He normally wakes up at 6am to go to work.

His son found him at 9am on the floor with right-sided weakness. He called the ambulance and they arrive at the house at 11am. The patient is not producing speech or obeying commands and has severe right-sided facial, arm and leg weakness.

How long is it since the stroke started?

- ☒ Unknown/Wake-up stroke
- ☐ 5 hours
- ☐ 2 hours

Correct

The time of onset should be taken to be the last time he was seen with no symptoms (the previous night). Even so, according to local protocol, in many regions this is considered a criterion for activation of the Stroke Code, as there are treatment options for this type of stroke of uncertain onset, which represents approximately 25% of stroke patients.

13.

Question 13

A 75-year-old man with hypertension who lives with his wife and is independent with basic activities of daily living. They phone the emergency services from the supermarket due to a sudden fall to the floor with ongoing right-sided weakness. His wife reports that he takes an antihypertensive drug and aspirin. When the emergency medical services arrive (half an hour after the onset), they find his BP is 220/120, he has severe right-sided weakness of the face, arm, and leg. He responds to one command only and has head deviation towards the left.

Was this patient previously functionally independent? (Rankin <3 or RANCOM negative)?

- ☒ Yes
- ☐ No

Correct

14.

Question 14

A 75-year-old man with hypertension who lives with his wife and is independent with basic activities of daily living. They phone the emergency services from the supermarket due to a sudden fall to the floor with ongoing right-sided weakness. His wife reports that he takes an antihypertensive drug and aspirin. When the emergency medical services arrive (half an hour after the onset), they find his BP is 220/120, he has severe right-sided weakness of the face, arm, and leg. He responds to one command only and has head deviation towards the left.

Would you activate the Stroke Code?

- ☐ No
- ☒ Yes

Correct

15.

Question 15

A 75-year-old man with hypertension who lives with his wife and is independent with basic activities of daily living. They phone the emergency services from the supermarket due to a sudden fall to the floor with ongoing right-sided weakness. His wife reports that he takes an antihypertensive drug and aspirin. When the emergency medical services arrive (half an hour after the onset), they find his BP is 220/120, he has severe right-sided weakness of the face, arm, and leg. He responds to one command only and has head deviation towards the left.

Which cerebral hemisphere is affected?

- ☒ Left
- ☐ Vertebrobasilar
- ☐ Right

Correct

This is a previously independent individual, who has acute left hemispheric focal neurology (contralateral right-sided weakness), started half an hour earlier, so the stroke code should be activated.

16.

Question 16

A 70-year-old woman with a history of multiple strokes in the past 5 years, who lives at home and can walk around the house with a stick, but needs someone to prepare her food, and needs help getting dressed and going to the toilet, so has a carer every day. The family call the emergency services because they notice that for the past 2 hours she has not moved her left arm and leg. When you arrive at the house you find a BP of 150/90, capillary blood glucose of 125 mg/dL, severe left sided weakness and gaze deviation towards the right.

Was this patient previously functionally independent? (Rankin <3 or RANCOM negative)?

- ☐ Yes
- ☒ No

Correct

17.

Question 17

A 70-year-old woman with a history of multiple strokes in the past 5 years, who lives at home and can walk around the house with a stick, but needs someone to prepare her food, and needs help getting dressed and going to the toilet, so has a carer every day. The family call the emergency services because they notice that for the past 2 hours she has not moved her left arm and leg. When you arrive at

the house you find a BP of 150/90, capillary blood glucose of 125 mg/dL, severe left sided weakness and gaze deviation towards the right

Would you activate the Stroke Code?

- No
- Yes

Correct

18.

Question 18

A 70-year-old woman with a history of multiple strokes in the past 5 years, who lives at home and can walk around the house with a stick, but needs someone to prepare her food, and needs help getting dressed and going to the toilet, so has a carer every day. The family call the emergency services because they notice that for the past 2 hours she has not moved her left arm and leg. When you arrive at the house you find a BP of 150/90, capillary blood glucose of 125 mg/dL, severe left sided weakness and gaze deviation towards the right

Where do you think the lesion is?

- Vertebrobasilar
- Right hemisphere
- Left hemisphere

Correct

The Stroke Code should not be activated because this person was not previously functionally independent, she needed help from others for the basic activities of daily living.

19.

Question 19

A 40-year-old woman has had a recent surgery for a right femur fracture, and therefore has limited mobility and is undergoing rehabilitation. Her family calls because for 1 hour she has been having worsening difficulty pronouncing words and right arm weakness. When you arrive, you observe slight weakness in the right arm (she can raise it but it drops), facial weakness and some mistakes with language production: she is speaking slowly and substitutes some words for others.

Would you activate the stroke code?

- No, because she had previous functional limitation
- Yes

Correct

Yes, the Stroke Code should be activated because the patient's previous functional limitation was due to a temporary situation related to a fracture.

20.

Question 20

A 40-year-old woman has had a recent surgery for a right femur fracture, and therefore has limited mobility and is undergoing rehabilitation. Her family calls because for 1 hour she has been having worsening difficulty pronouncing words and right arm weakness. When you arrive, you observe slight weakness in the right arm (she can raise it but it drops), facial weakness and some mistakes with language production: she is speaking slowly and substitutes some words for others.

Which cerebral hemisphere is affected?

- Vertebrobasilar
- Right
- Left

Correct

Her symptoms (right-sided weakness and mild aphasia) suggest a left hemispheric stroke.