

SCRIPT

APHASIA THREE WEEKS AFTER PREGNANCY



SCENARIO

#291

NAME

JOANNE GONZALEZ

SPECIALTY

Neurology

DIFFICULTY LEVEL

INTERMEDIATE

SIMULATION ENVIRONMENT

INTRA HOSPITAL - EMERGENCY ROOM

BODY INTERACT™
VIRTUAL PATIENTS

This patient is not a real patient, and the clinical scenario, while clinically plausible, is fictional.

Scenario

General description of the scenario info. Corresponds to the initial information presented to the trainee when selecting this scenario.

Title

Aphasia three weeks after pregnancy

Context

Joanne was at home, taking care of her baby when she suddenly had a seizure with uncontrolled movements of the right limbs for approximately one minute. After that, she had difficulty speaking and weakness in the right limbs.

Briefing

Female patient, age 35, is brought to the emergency room by her husband, due to a seizure at home and right hemiparesis with speech impairment afterward, around 60 minutes after the onset of her symptoms. She had a child 22 days ago.

General learning objective

Recognize signs and manage an acute stroke.

Specific learning objectives

Decision making regarding reperfusion therapy

Know indications and contra-indications to intravenous thrombolysis and thrombectomy

Recognize that a non-complicated vaginal delivery is not a contra-indication to thrombolysis

Pre-simulation notes

-

Environment

Intra Hospital - Emergency Room

Specialty

Neurology

Difficulty Level

Intermediate

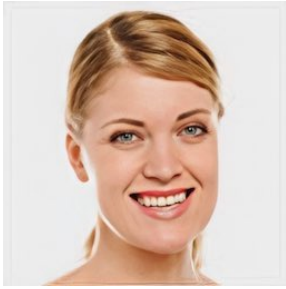
Reviewers

Angels Initiative

Patient characteristics

Characterization of the patient's demographic, habits, behavior and specific status effects.

Avatar



Patient Name

Joanne Gonzalez

Age

35 years

Race/Ethnicity

European/Caucasian

Smoker

No

Sedated

No

Agitated

No

Facial palsy

50

Eyelid closure

0

Gender

Female

Eye color

Blue

Conscious

Yes

Confused

No

Last meal over 2h

Yes

Speech impairment

No

Renal metabolic compensation

Auto

Patient parameters

These parameter values are used by the simulator to initialize this scenario and correspond to a pre-treatment baseline.

Systolic arterial blood pressure (mmHg)

164

Heart rate (bpm)

75

Respiratory rate (/min)

14

Temperature (°C)

36

Urinary output (mL/kg/h)

0.75

Height (cm)

165

Diastolic arterial blood pressure (mmHg)

102

O2 saturation (%)

97

Blood glucose (mg/dL)

115

Hemoglobin (g/dL)

14.9

Weight (kg)

68

BMI

25.0

Potassium (mEq/L)

4.1

Sodium (mEq/L)

138

Speech rate (speed multiplier)

0

Other character

Characterization of the other character included in the scenario can be healthcare professional, relative, friend or other.

Non-Player Character

Relative: Duane Gonzalez

Physical examination

The items below characterize the patient's physical examination and monitoring findings on admission.

Airway

Airway observation

2nd Priority

Clear airway. Normal oropharynx. No readily audible abnormal breath sounds.

Breathing

Chest palpation

Not a priority

Normal: 2L - normal; 2R - normal

Chest percussion

Not a priority

Right: 1R - resonance; 2R - resonance; 3R - resonance; 4R - resonance; 5R - resonance
Left: 1L - resonance; 2L - resonance; 3L - superficial cardiac dullness; 4L - superficial cardiac dullness; 5L - resonance

O2 Sat (%)

1st Priority

97

Pulmonary auscultation

Not a priority

Clear to auscultation, with normal vesicular murmurs in all sites.

Respiratory rate (/min)

2nd Priority

14

Circulation

Blood pressure (mmHg)

1st Priority

164/102

Capillary refill time (s)

Not a priority

1.3

Cardiac auscultation

2nd Priority

Regular rate and rhythm, normal S1 and S2 sounds, no murmurs, gallops or rubs.

Heart rate (bpm)	1st Priority	75
Pulse palpation	Not a priority	Carotid - Amplitude: normal; Rhythmic; Radial - Amplitude: normal; Rhythmic, both sides equal; Femoral - Amplitude: normal; Rhythmic, both sides equal; Dorsalis pedis & Posterior tibial - Amplitude: normal; Rhythmic, both sides equal; Popliteal - Amplitude: normal; Rhythmic, both sides equal.
Urinary output (mL/kg/h)	Not a priority	0.75
Disability		
Blood glucose (mg/dL)	1st Priority	115
Glasgow Coma Scale	2nd Priority	Initial and after aggravation: 11 (E4V2M5) After thrombectomy: 13 (E4V3M6)
Pupil light reflex	Not a priority	Right: Size - 4 mm; Right eye light: 2 mm; Left eye light: 2 mm Left: Size - 4 mm; Right eye light: 2 mm; Left eye light: 2 mm
Exposure		
Abdominal auscultation	Not a priority	Normal hydro-aerial sounds without abdominal murmurs.
Abdominal palpation	Not a priority	6R - tympanic; 7R - tympanic; 6L - tympanic; 7L - tympanic
Abdominal percussion	Not a priority	No visceromegaly.
Temperature (°C)	1st Priority	36

Dialogues

This is a complete list of all possible dialogue questions (on the left) and the corresponding responses (on the right).

History Taking

Chief Complaint

01. Do you remember what happened?

Duane Gonzalez: She was not feeling good, started complaining about strange

1st Priority

movements in her right arm and leg, as I said. She was also feeling difficulties speaking.

02. Do you know when it was the last time she ate?

Duane Gonzalez: Three hours ago.

Not a priority

03. How was the delivery of your baby?

Duane Gonzalez: It was a normal birth, no surgery was needed.

1st Priority

History of Present Illness

04. Does she have hypertension?

Duane Gonzalez: No.

2nd Priority

05. When did her symptoms start?

Duane Gonzalez: I can't say for sure but she was fine about an hour ago.

1st Priority

06. Was she feeling pain?

Duane Gonzalez: No, not really.

2nd Priority

07. Did she had any severe illness or injury before?

Duane Gonzalez: No.

2nd Priority

Past Medical/Surgical History

08. Does she have high cholesterol?

Duane Gonzalez: No.

2nd Priority

09. Does she have any

Duane Gonzalez: Yes, she was pregnant and gave birth 22 days ago.

concomitant health conditions?

1st Priority

10. Have you ever been hospitalized?

2nd Priority

Duane Gonzalez: Yes. Some years ago she did a surgery, something to do with the mitral valve.

Medications and Allergies

11. Has she been taking any medication?

1st Priority

Duane Gonzalez: She's not taking any medication.

Social History

12. Does she exercise often?

Not a priority

Duane Gonzalez: Yes, but not recently, because of the pregnancy.

13. How's her diet?

Not a priority

Duane Gonzalez: It's relatively normal.

14. Do you know how many meals she does per day?

Not a priority

Duane Gonzalez: I think around five.

15. Have you noticed any changes in her appetite recently?

Not a priority

Duane Gonzalez: No.

16. Has she been under stress recently?

2nd Priority

Duane Gonzalez: Yes, of course. It hasn't been easy to manage a three-week-old baby.

17. Does she drink alcohol?

Duane Gonzalez: No, never.

18. Does she smoke?

2nd Priority

Duane Gonzalez: No.

19. Any recent weight changes?

2nd Priority

Duane Gonzalez: No.

Not a priority

Medical Tests

The items below describe the possible test results in this scenario, including rules that may affect those results.

Bacteriological examinations

Blood cultures

Not a priority

Negative blood cultures.

Urine culture

Not a priority

Negative urine cultures.

Decision aids

Stroke scale (NIHSS)

1st Priority

15 (Initial)
18 (After aggravation)
12 (After thrombolysis)
4 (After thrombectomy)

Electrophysiology

12-Lead ECG

Not a priority

Normal sinus rhythm.

Imaging

Abdominal CT

Not a priority

Liver: normal. Bile ducts: normal.
Gallbladder: no calcified gallstones.
Normal caliber wall. Pancreas: normal.
Spleen: normal. Adrenals: normal.
Kidneys: normal. Bowel: normal caliber.
Mesenteric lymph nodes: no enlarged mesenteric lymph nodes. Peritoneum: no ascites or free air; no fluid collection.
Vessels: normal. Retroperitoneum: normal. Abdominal wall: normal.
Bones: normal.

Abdominal ultrasound

Not a priority

Assessed abdominal structures present no alterations.

Abdominal X-Ray	Not a priority	No visible alterations.
AP pelvis X-Ray	Not a priority	No significant skeletal alterations.
Cerebral angiography	1st Priority	Occlusion of left MCA.
Chest CT	Not a priority	Absence of significant changes of pulmonary parenchyma density and pleural effusion.
Chest X-Ray	Not a priority	No visible alterations.
Coronary angiography	Not a priority	Coronary angiography not performed due lack of indication.
CT pulmonary angiogram	Not a priority	No presence of thrombus. No evidence of aortic dissection.
Head CT	1st Priority	No parenchymal changes; hyperdensity of left MCA.
Lower limbs CT	Not a priority	No significant alterations.
Lower limbs ecodoppler	Not a priority	No significant changes.
Neck Doppler ultrasound	Not a priority	Normal carotid artery flow.
Pelvic CT	Not a priority	No enlarged retroperitoneal or pelvic lymph nodes. No ascites or free air. No other fluid collection. Blood vessels normal. Bone structures normal. Retroperitoneum normal.
Transcranial Doppler	Not a priority	Occlusion of left internal carotid artery siphon.
Transesophageal echocardiogram	Not a priority	No alterations.
Transthoracic echocardiogram	Not a priority	No alterations found to cardiac morphology. Normal left ventricular systolic function.
Lab tests		
Arterial blood gas	Not a priority	Blood pH - 7.39
		PaCO ₂ (mmHg) - 42
		HCO ₃ ⁻ (mEq/L) - 24.6
		BE (mEq/L) - 0.02

Biochemistry	1st Priority	Cl ⁻ (mEq/L) - 102
		Lactate (mg/dL) - 9.0
		Due to simulation of test imprecision, there may be slight differences in the actual results.
		BUN (mg/dL) - 19
		Na ⁺ (mEq/L) - 139
		K ⁺ (mEq/L) - 4.1
		AST (IU/L) - 21
		ALT (IU/L) - 32
		AP (IU/L) - 78
		CK (IU/L) - 113
Cardiac biomarkers	Not a priority	CRP (mg/L) - 2.3
		Due to simulation of test imprecision, there may be slight differences in the actual results.
		CK-MB Mass (ng/mL) - 2
Coagulation tests	1st Priority	Troponin I (ng/mL) - 0.01
		Myoglobin (ng/mL) - 17
		aPTT (s) - 36
Complete blood count	1st Priority	Prothrombin time (s) - 12.0
		INR - 1.0
		D-Dimer (ug/mL) - 0.058
		Leukocytes (/uL) - 8500
		Neutrophils (/uL) - 4500 (53%)
		Lymphocytes (/uL) - 3200 (38%)
		Monocytes (/uL) - 410 (5%)

		Eosinophils (/uL) - 280 (3%)
		Basophils (/uL) - 110 (1%)
		Immature granulocytes (/uL) - 0 (0%)
		Erythrocytes (×10 ⁶ /μL) - 4.8
		Hemoglobin (g/dL) - 14.9
		Hematocrit (%) - 44
		MCV (μm ³) - 92
		MCH (pg/cell) - 30
		MCHC (g/dL) - 35
		RDW (%) - 12.0
		Platelets (×10 ³ /μL) - 222
Lipid profile	Not a priority	Total cholesterol (mg/dL) - 171
		Triglycerides (mg/dL) - 145
		HDL cholesterol (mg/dL) - 69
		LDL cholesterol (mg/dL) - 73
		Cholesterol ratio (Tchol/HDL-C) - 2.5
Urinalysis	Not a priority	Specific Gravity - 1.024
		pH - 6.0
		Urine color - Yellow
		Appearance - Clear
		WBC Esterase - Negative
		Protein - Negative
		Albumin - Negative
		Glucose - Negative

Urinary antigens

Not a priority

Ketones - Negative

Erythrocytes - Negative

Bilirubin - Negative

Urobilinogen, Semi-Qn - 0.0

Nitrite, Urine - Negative

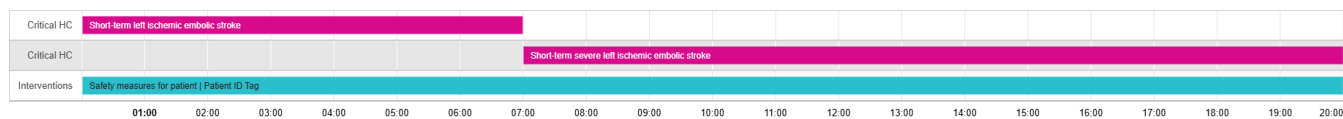
Intoxicants - Negative

Streptococcus pneumoniae - Negative

Legionella pneumophila - Negative

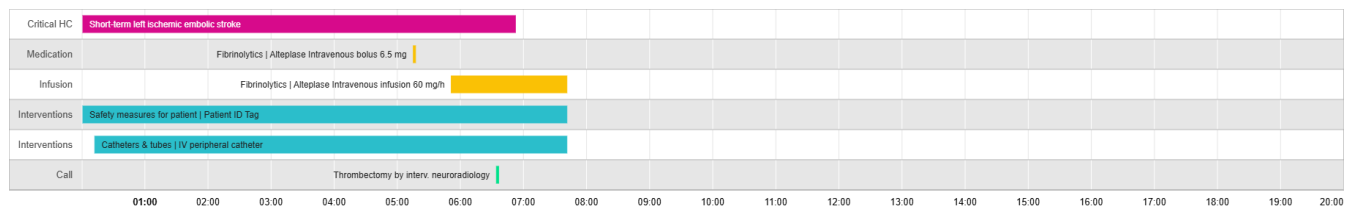
Baseline

This section is automatically generated and predicts scenario behavior assuming no actions by the trainee, which usually represents the worst-case scenario.



Optimal clinical approach - International

This section previews how the optimal approach resolves the scenario successfully. Comparison with Baseline may be useful to understand the scenario behavior.



Management

The items below represent management actions relevant to solving this clinical scenario. Notes: 1st Priority – Mandatory items required for a successful outcome. 2nd Priority – Optional items considered adequate but not essential. Not a Priority – Unnecessary items that are inadequate or a waste of time.

i.1 - Administer a fibrinolytic

1st Priority

Medications | Fibrinolytics |
Alteplase

Medications | Fibrinolytics |
Tenecteplase

i.30

1st Priority

Call | Thrombectomy by interv.
neuroradiology

Question(s) during the simulation

Questions presented to the trainee in order to have a more detailed evaluation of the use of the clinical scenario.

**"Does she have any
concomitant health
conditions?" dialogue
question:**

Question

According to the guidelines,
how long after a vaginal
delivery is it considered safe for
thrombolysis?

Correct answer

14 days

2 Incorrect answer(s)

7 days

28 days

Head CT question:

Question

Based on the patient's clinical
assessment and the head CT
findings, select the most likely
diagnosis:

Correct answer

Acute ischemic stroke

2 Incorrect answer(s)

Subarachnoid hemorrhage

Head trauma

Head CT question:

Question

Does this CT have signs of any intracranial hemorrhage?

Correct answer

No

1 Incorrect answer(s)

Yes

Head CT question:

Question

Based on the neurological assessment, please rate the stroke severity:

Correct answer

Moderate stroke

2 Incorrect answer(s)

Minor stroke

Severe stroke

Head CT question:

Question

Are there any contraindications for thrombolysis?

Correct answer

Yes

1 Incorrect answer(s)

No

Head CT question:

Question

Based on the patient's clinical assessment and the head CT findings, select the most likely diagnosis:

Correct answer

Acute ischemic stroke

2 Incorrect answer(s)

Head trauma

Subarachnoid hemorrhage

Head CT question:

Question

Does this CT have signs of any intracranial hemorrhage?

Correct answer

No

1 Incorrect answer(s)

Yes

Head CT question:

Question

Based on the neurological assessment, please rate the stroke severity:

Correct answer

Moderate stroke

2 Incorrect answer(s)

Minor stroke

Severe stroke

Head CT question:

Question

Are there any contraindications for thrombolysis?

Correct answer

No

1 Incorrect answer(s)

Yes

Cerebral angiography question:

Question

Which vascular lesion is visible?

Correct answer

Occlusion of the left MCA M1 segment

2 Incorrect answer(s)

Occlusion of the left PCA P1 segment

No occlusions

Cerebral angiography question:

Question

What is the extent of the established ischemic infarct in the CT scan?

Correct answer

No changes. ASPECTS: 10

2 Incorrect answer(s)

Minor lesion. ASPECTS: 7

Large infarct. ASPECTS: 2

Cerebral angiography question:

Question

Does this patient have an indication for thrombectomy?

Correct answer

Yes

1 Incorrect answer(s)

No

Question(s) after simulation

Questions presented to the trainee in order to have a more detailed evaluation of the use of the clinical scenario.

Summative Multiple Choice Question:

Question

What is the most likely diagnosis?

Correct answer

Left hemisphere ischemic stroke

3 Incorrect answer(s)

Right hemisphere ischemic stroke

Left hemisphere hemorrhagic stroke

Brain tumor

Formative Multiple Choice Question:

Question

When should this patient have a follow-up head CT?

Correct answer

24 hours after thrombolysis

2 Incorrect answer(s)

48 hours after thrombolysis

It is not necessary to repeat head CT

Formative Multiple Choice Question:

Question

What is the minimum acceptable platelet count for administering thrombolysis in a patient with no known history of hematological pathology?

Correct answer

Thrombolysis should be administered without waiting for the platelet count result

2 Incorrect answer(s)

100 x 10⁹/L

50 x 10⁹/L

Formative Multiple Choice Question:

Question

When a patient has a seizure in the context of acute ischemic stroke, which of the following is true:

Correct answer

The patient should start

2 Incorrect answer(s)

antiepileptic therapy

The seizure is an absolute contraindication for thrombolysis

The patient should perform an EEG before thrombolysis

Handoff question

Question presented to the trainee to assess their ability to effectively communicate patient information during a transition of care. This question is optional.

Question

Summarize this Body Interact scenario using a structured handoff pattern.

Review handoff pattern

SBAR (Situation, Background, Assessment, Recommendation): Includes current condition and reason for handoff, relevant history and context, assessment details, and recommended actions.

SOAP (Subjective, Objective, Assessment, Plan): Covers patient-reported symptoms and history, measurable data and findings, clinical impressions and diagnoses, and the treatment plan.

I-PASS (Illness Severity, Patient Summary, Action List, Situation Awareness and Contingency Planning, Synthesis by Receiver): Encompasses illness status, patient background, tasks and actions, potential changes and plans, and confirmation of understanding.

AT-MIST (Age, Time of incident or onset of symptoms, Mechanism of injury/Medical Complaint, Injuries or Inspections head-to-toe, vital Signs, and Treatments): Describes the cause of injury or medical complaint, findings from head-to-toe inspection, vital signs, and treatments provided.

Simulation Ending Messages

Feedback messages shown to the user based on specific successful or unsuccessful approaches, triggered by defined conditional rules.

Title	Type	Message	Conditional
Fibrinolytic + Thrombectomy	Success	Congratulations. You have solved the case according to the guidelines.	If a fibrinolytic and thrombectomy are administered, therefore treating the existing health conditions
Thrombectomy performed (but fibrinolytic not administered)	Success	Excellent work! You gathered the full clinical history and ensured comprehensive patient care. This thorough approach guarantees safe and accurate management, allowing you to better meet your patient's needs. Keep it up!	If only thrombectomy is administered this success message is displayed
If thrombectomy is not performed	Failure	You have not used all the recommended treatments for the patient. Try again!	If thrombectomy has not been administered after ten minutes.

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