

Case Study: Ischemic Stroke

Group A and D

Group Members

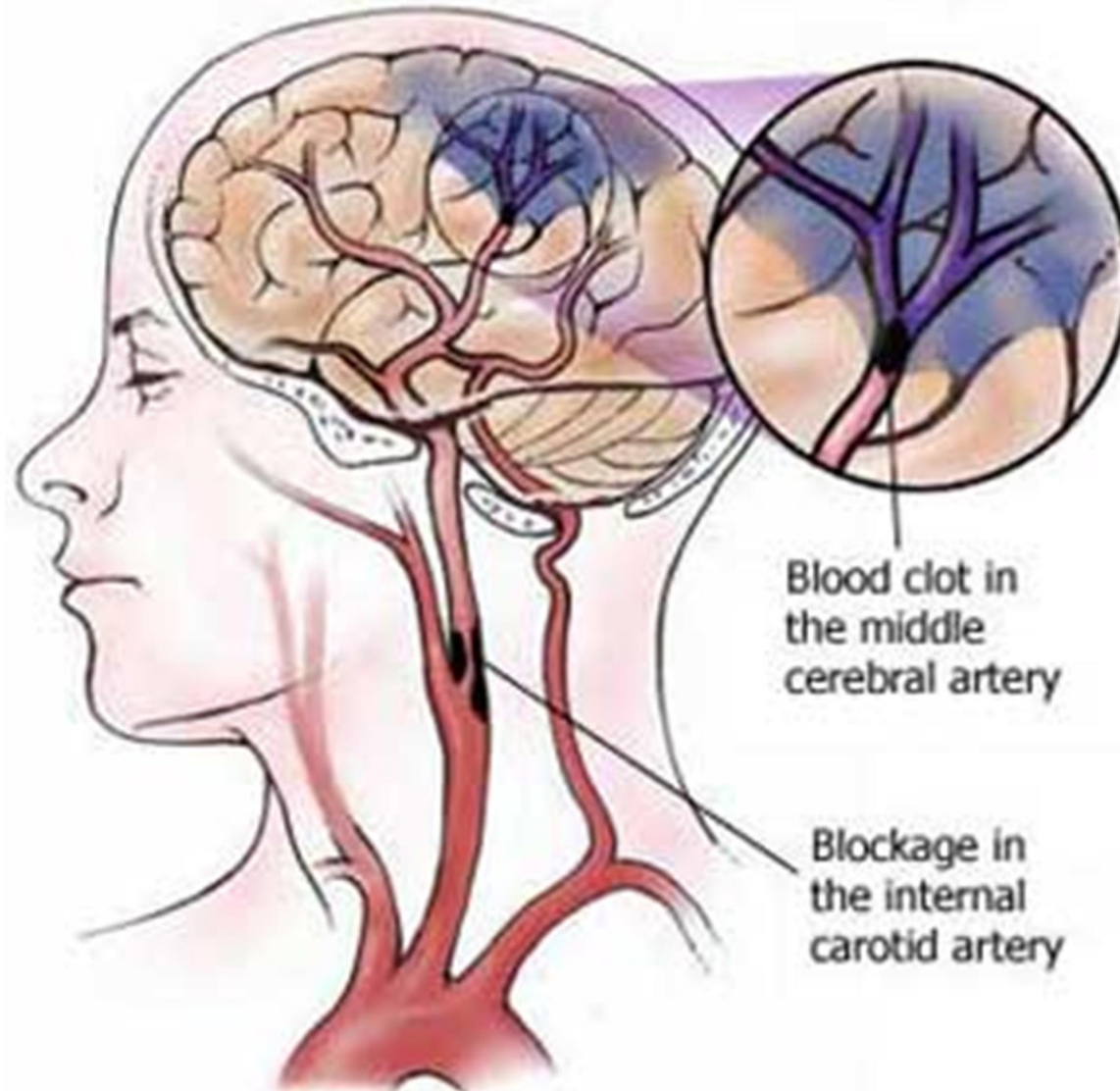
- Rudolf Cymorr Kirby P. Martinez
- Madonna Beler
- Pafhan Attarit
- Ma Cho Oo
- Phath Yanphearath
- Pyae Phyo Wai Zin Tun
- Thin Thin Swe
- Linh Vuong
- Pariyaphon Areerom
- Ni Ni Mar
- Toan Nguyen Van

Adviser: Thanpimol Kensakoo

Overview of Ischemic Stroke

Ischemic Stroke

Occurs when oxygen-rich blood flow to the brain is restricted by a blood clot or other blockage



Risk Factor of Ischemic Stroke

Modifiable Risk Factors

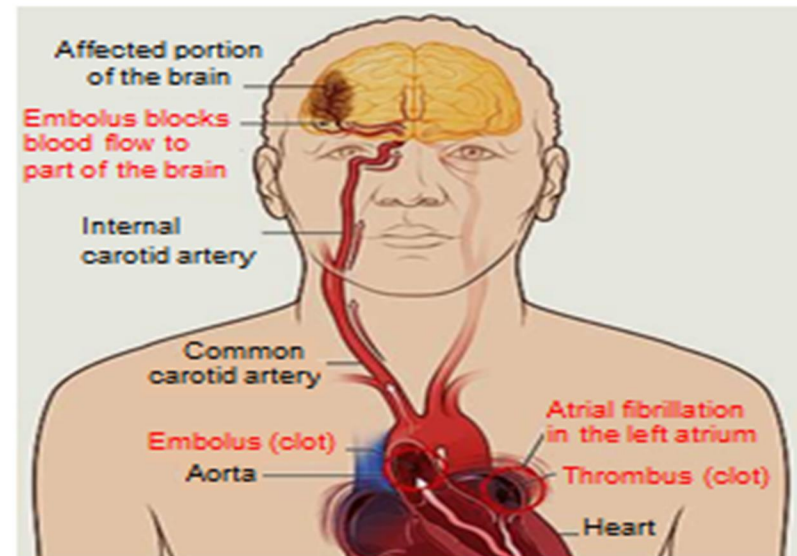
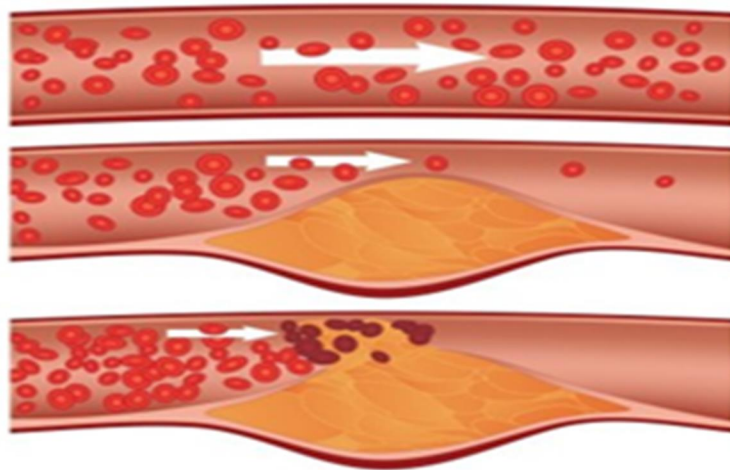
- Hypertension
- Diabetes
- Smoking
- Dyslipidemia
- Obesity
- Sedentary existence
- Sleep apnea

Non-modifiable Risk Factors

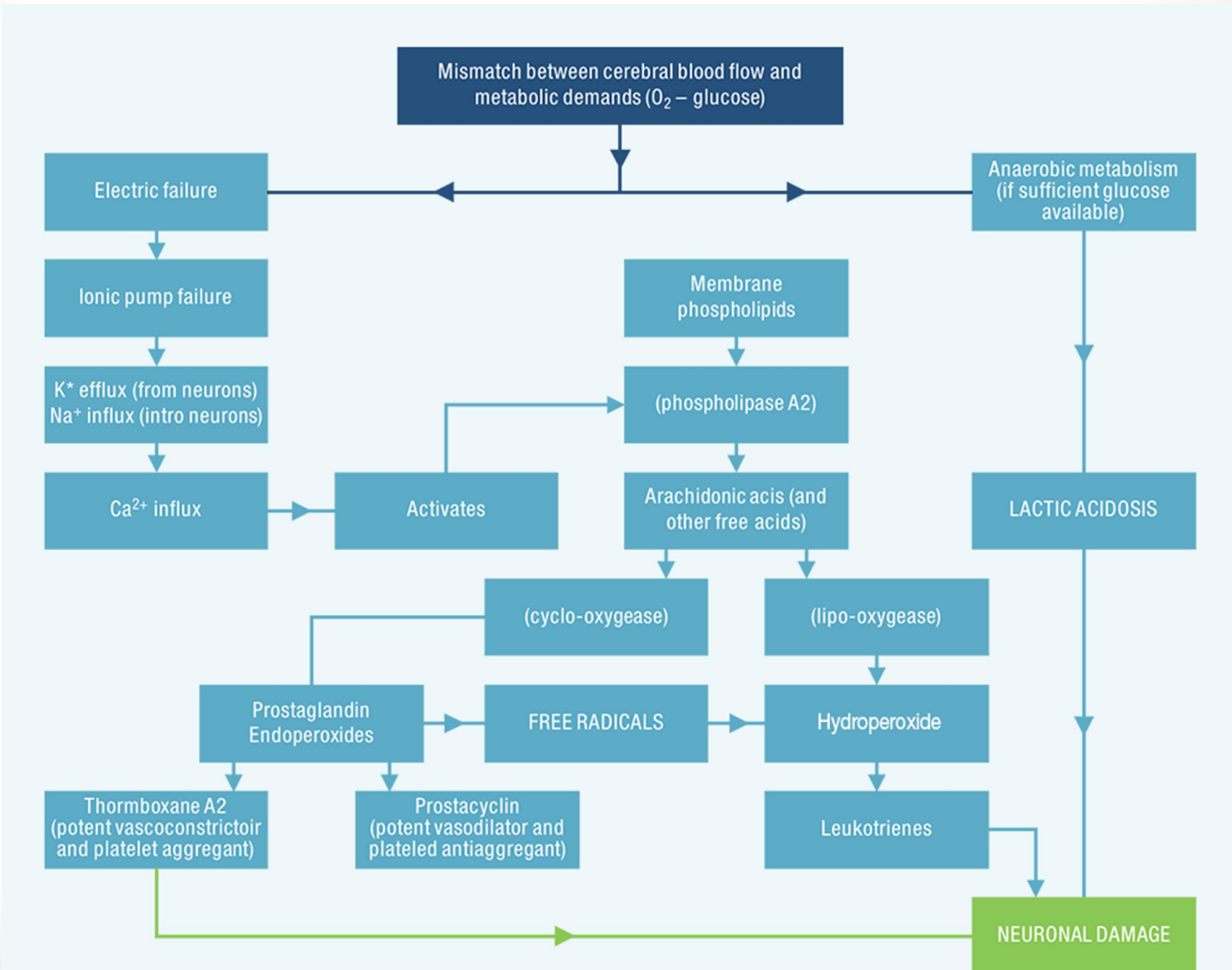
- Age
- Prior stroke
- History of vascular disease (CAD, PVD, stroke)
- Family history of premature vascular disease

Thromboembolism

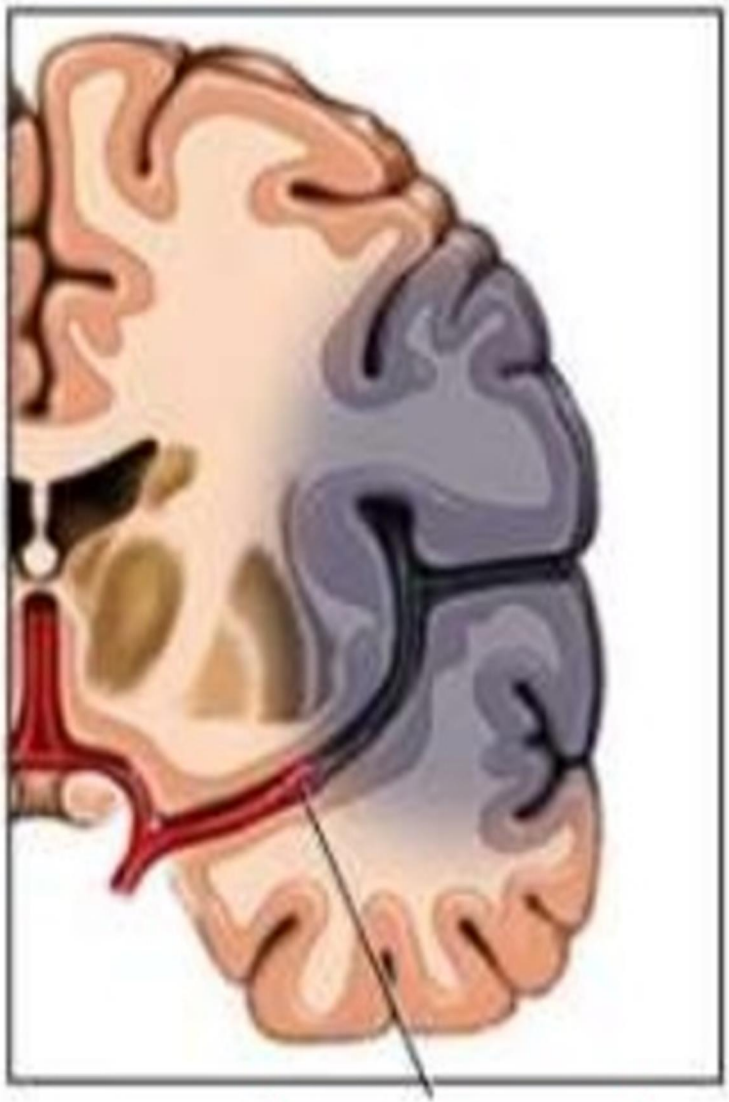
Cardioembolism



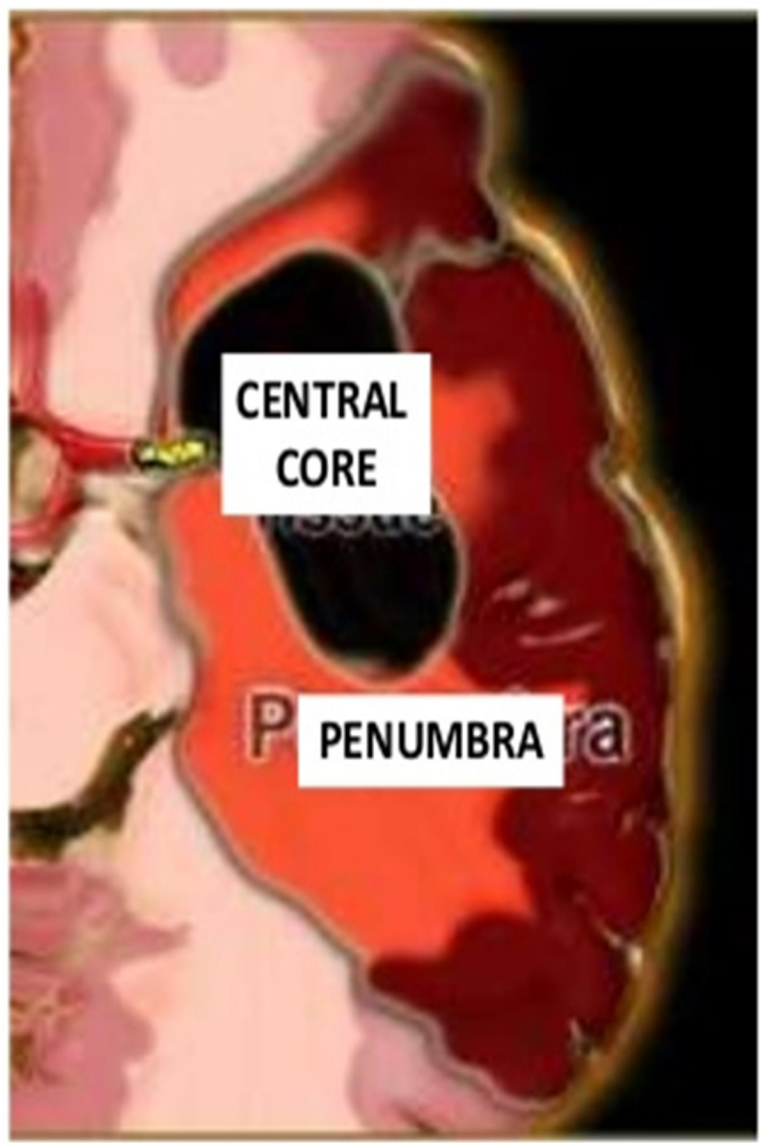
Overview of Ischemic Stroke



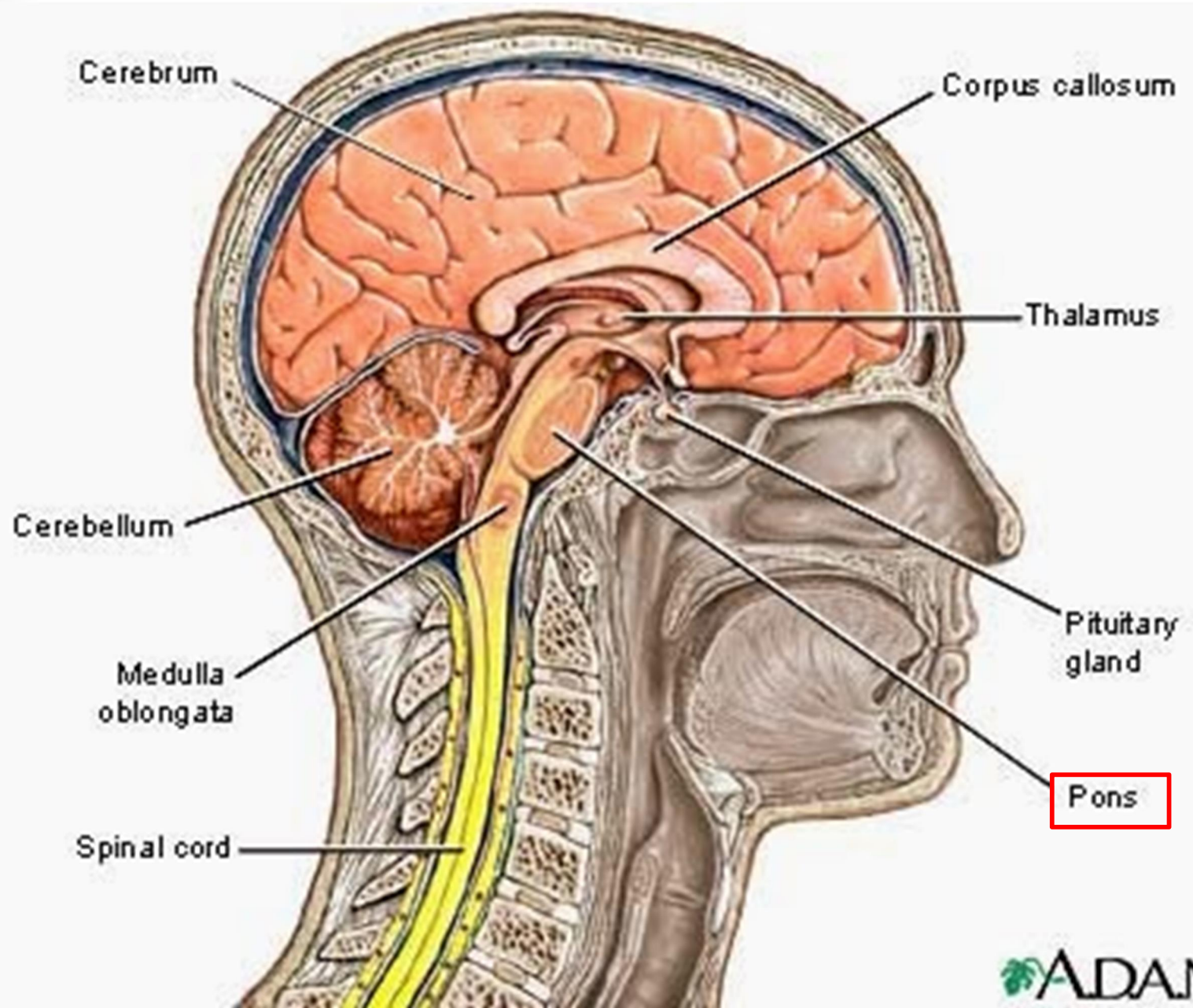
Goal: Reperfusion



FOCAL ISCHEMIA



Localization of Ischemic Stroke



Pre – rT-PA: 16
Jan 2017 9:43
AM

Recent small
infarction or
artifact at the
right-sided
pons

ADAM

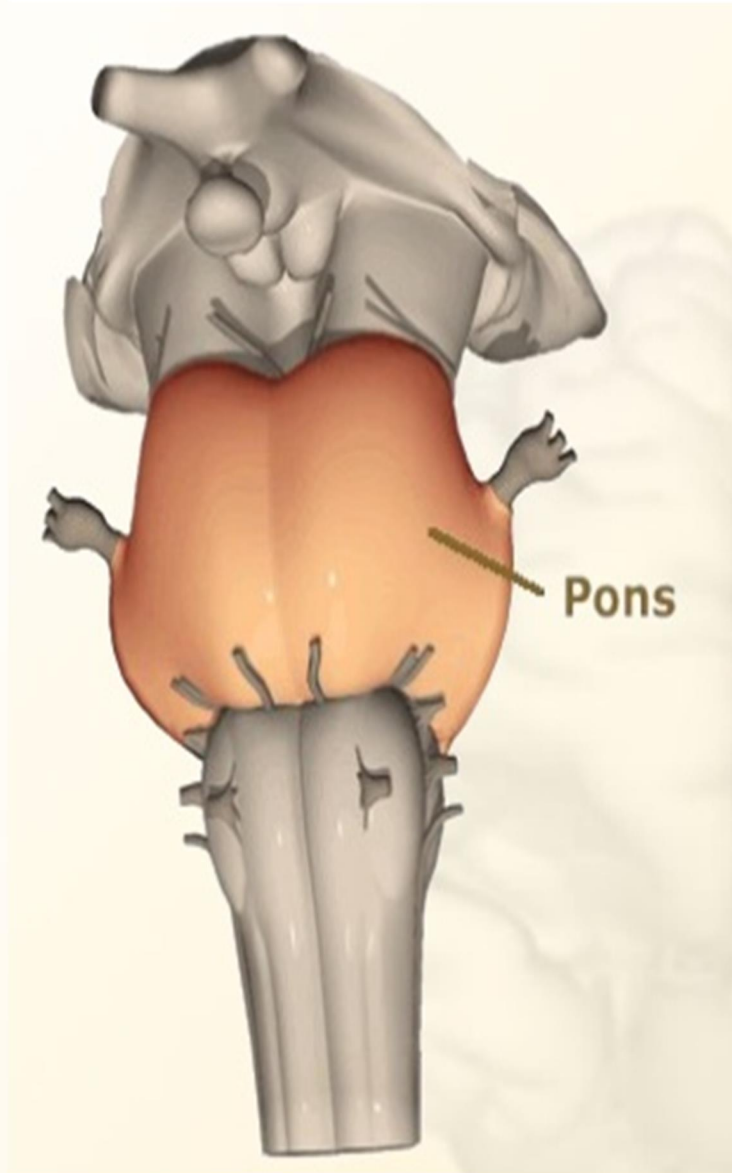
Localization of Ischemic Stroke

The Pons

The pons is the rounded **brainstem** region between the midbrain and the medulla oblongata. In fact, pons means “bridge” in Latin.

The main function of the pons is to connect the cerebellum to the rest of the brain and to modify the respiratory output of the medulla.

The pons is the origin of several **cranial nerves**.



Pre – rT-PA: 16
Jan 2017 9:43
AM

Recent small
infarction or
artifact at the
right-sided
pons

Case of Patient YXZ

- Sex: Male
- Age: 77 years old
- Weight: 68 Kgs
- Date of admission: 16 Jan 2017
- Time of Admission: 9:25 AM
- Chief Complaint: Left side weakness
- History:
 - Present: 2 hrs and 25 mins PTA while he did homework, patient felt Left side weakness: Dysarthria
 - Past: (+) Left sided weakness 10 years ago, treated with aspirin 325mg to full recovery; s/p heniorrhapy 3 years ago, (+) dyslipidemia, (+) hypertension
 - None smoker, non alcoholic, no known allergy, no family history

ER Admission
(9:25 am)

CT Scan

Stroke Unit

Discharge

Case of Patient YXZ

- Physical Exam

- Temperature 36.5 degree Celsius; RR 20 bpm; PR 96 bpm; BP 103/68 mmHg
- Neurological examination : E4V5M6
- PERRLA 3mm OU
- Motor power : Right side (U and L E) grade 5; Left side (U and L E) grade 4
- NIHSS : 3 (Motor Left arm drift =1, Motor Left leg drift =1, Moderate Dysarthria=1)
- Barthel Index: 60
- Braden Scale : 18
- Fall scale: 3
- Modified Rankin scale: 3
- Dysphagia Screening Test : Pass

ER Admission
(9:25 am)

CT Scan

Stroke Unit

Discharge

Case of Patient YXZ

- Investigation

- Chest X-ray: There is no recent pulmonary infiltration or pleural effusion, Heart size is not enlarged
- EKG: Normal sinus rhythm

ER Admission
(9:25 am)

CT Scan

Stroke Unit

Discharge

Case of Patient YXZ

Laboratories

- 16 Jan 2017
 - PT 11.8; INR 0.95
 - Blood Sugar: 98
 - BUN: 20; Creatinine: 1.19
 - Serum Electrolyte: (Na: 138.6; K: 3.09; Cl: 103)
 - CBC: (Hct: 41.8; Plt: 125, 000; **WBC: 16, 400**)
 - UA: (**WBC: 20-30; RBC: 10-20; Bac:1+**)

- 17 Jan 2017
 - Lipid Profile: (Chol: 153; Trigly: 77; HDL: 48; LDL: 82)
 - Blood Sugar: 96
 - VDRL: Non-reactive
 - HbA1c: 6.1

- 19 Jan 2017
 - UA: (WBC: 1-2; RBC: 1-2; Bac: -)
 - Urine C/S: E. coli ESBL

ER Admission
(9:25 am)

CT Scan

Stroke Unit
(10:22 am)

Discharge

Case of Patient YXZ

ER Admission

- Pre – rT-PA: 16 Jan 2017 9:43 AM
 - Recent small infarction or artifact at the right-sided pons

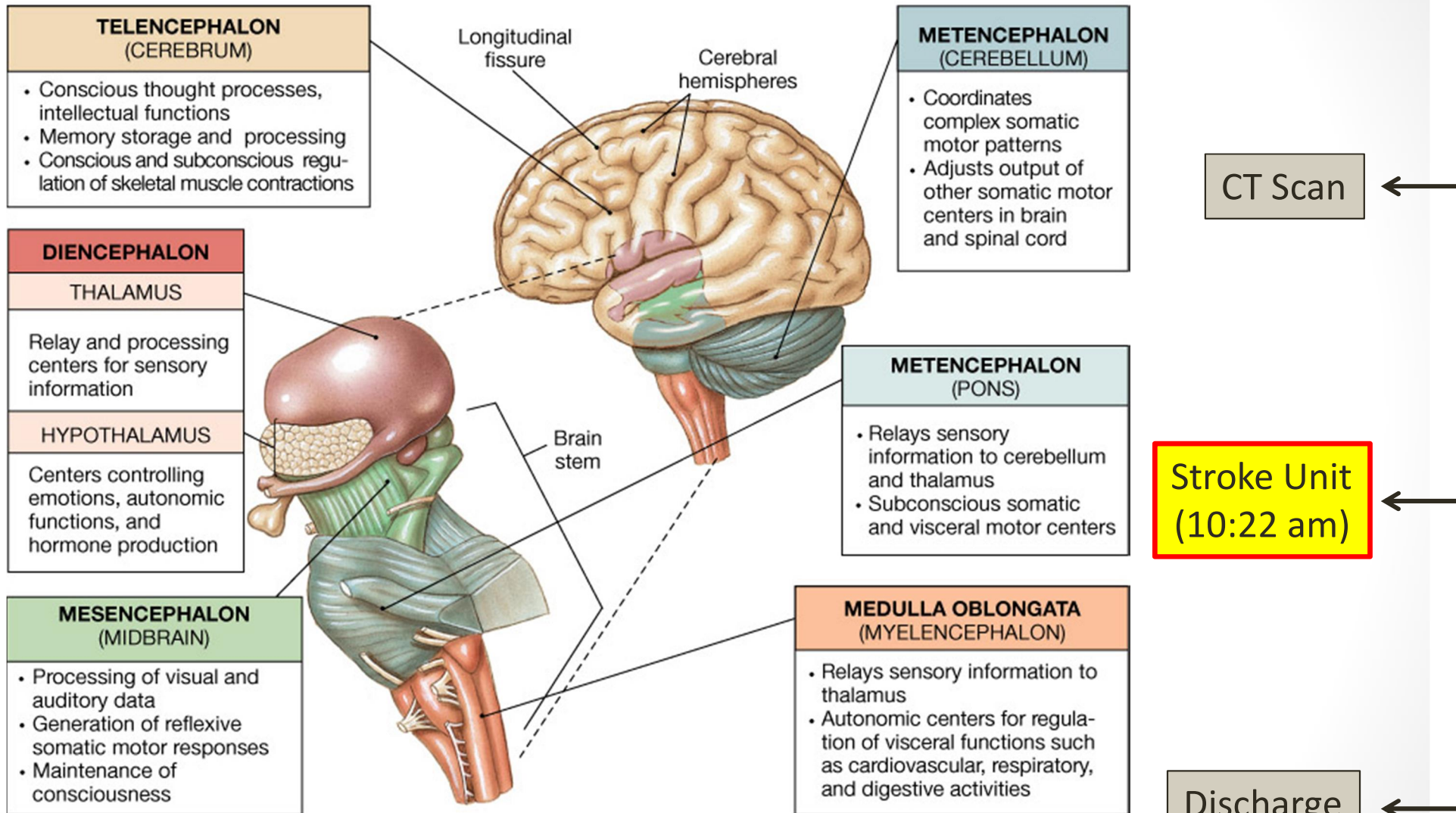
CT Scan

- Post – rT-PA: 17 Jan 2017 9:51 AM
 - No progressive infarction at Rt.putamen and no acute hemorrhage are noted after administration of rTPA

Stroke Unit

Discharge

Case of Patient YXZ



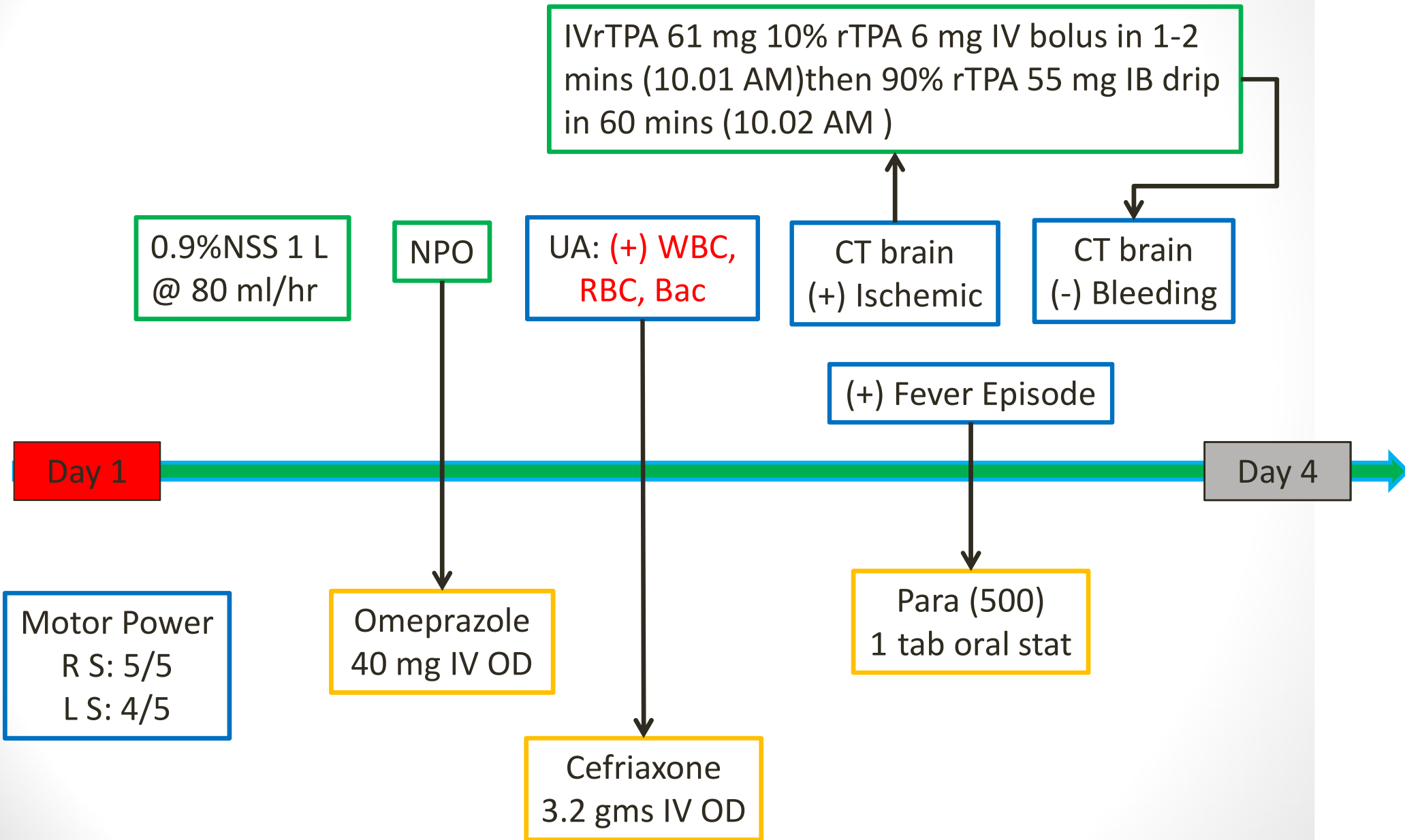
Day 1

Day 2

Day 4

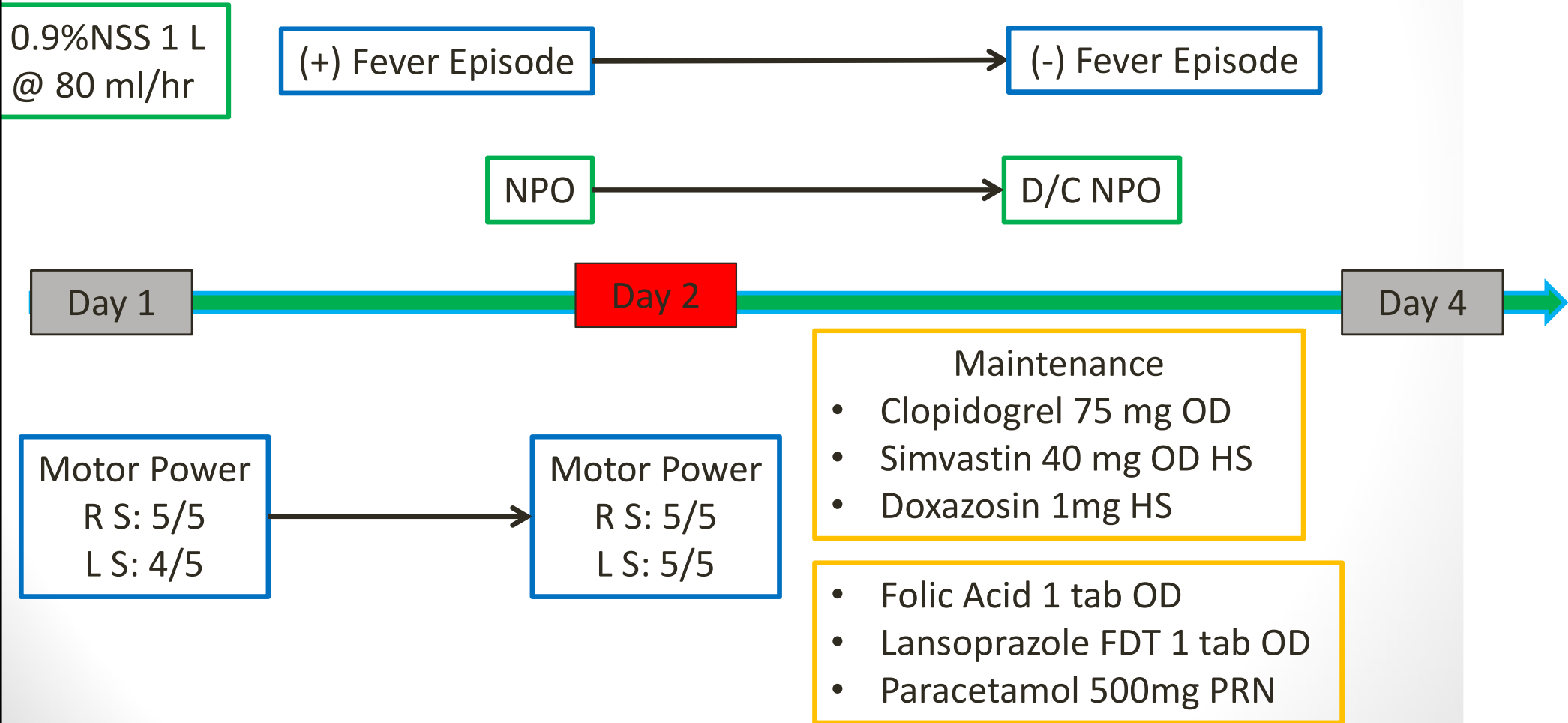
Case of Patient YXZ

Course in the Ward



Case of Patient YXZ

Course in the Ward



Case of Patient YXZ

Course in the Ward

0.9%NSS 1 L
@ 80 ml/hr

D/C IV

UA: (+) WBC,
RBC, Bac

UA: WBC: 1-2; RBC:
1-2; Bac: -

For Home: FF after 2 weeks

Day 1

Day 2

Day 4

Motor Power
R S: 5/5
L S: 4/5

Motor Power
R S: 5/5
L S: 5/5

Maintenance

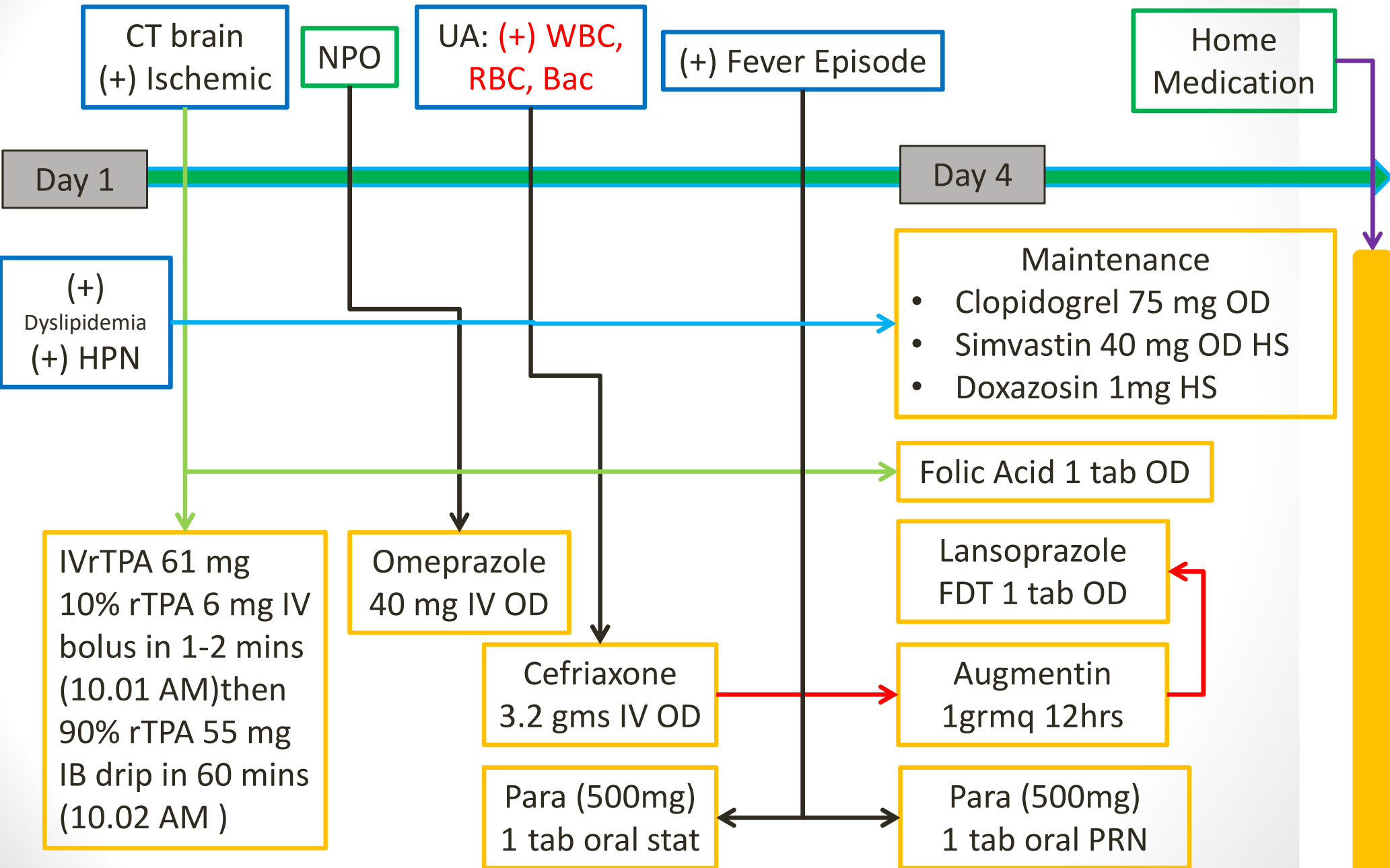
- Clopidogrel 75 mg OD
- Simvastatin 40 mg OD HS
- Doxazosin 1mg HS

- Folic Acid 1 tab OD
- Lansop FDT 1 tab OD
- Paracetamol 500mg PRN

Antibiotic
Augmentin
1gram q
12hrs

Case of Patient YXZ

Medication Analysis



Case of Patient YXZ

Medication Analysis

Day 1

Day 4

Indication: Thrombolytic

Nursing Responsibilities

- Check patency of IV line
- Monitor for sign of bleeding or worsening of condition
- Follow appropriate hospital protocol in proper administration

IVrTPA 61 mg
10% rTPA 6 mg IV
bolus in 1-2 mins
(10.01 AM) then
90% rTPA 55 mg
IB drip in 60 mins
(10.02 AM)

Case of Patient YXZ

Medication Analysis

Day 1

Day 4

Nursing Responsibilities

- Monitor BP at least OD
- Do not change dose and time
- W/o for adverse reaction

Indication:

- Anti-platelet
- Lower lipid
- Control BP & BPH

Maintenance

- Clopidogrel 75 mg OD
- Simvastatin 40 mg OD HS
- Doxazosin 1mg HS

Do not discontinue medication without physician's advice

Indication: Lower Stroke Risk

Folic Acid 1 tab OD

W/o for headache or allergy

Omeprazole 40 mg IV OD

Indication: Proton pump inhibitor

Lansoprazole FDT 1 tab OD

Take before meal

Complete dose, w/o for allergy

Ceftriaxone 3.2 gms IV OD

Indication: 3rd gen. antibiotic for UTI

Augmentin 1grmq 12hrs

Take with full stomach

Monitor fever progression

Para (500mg) 1 tab oral stat

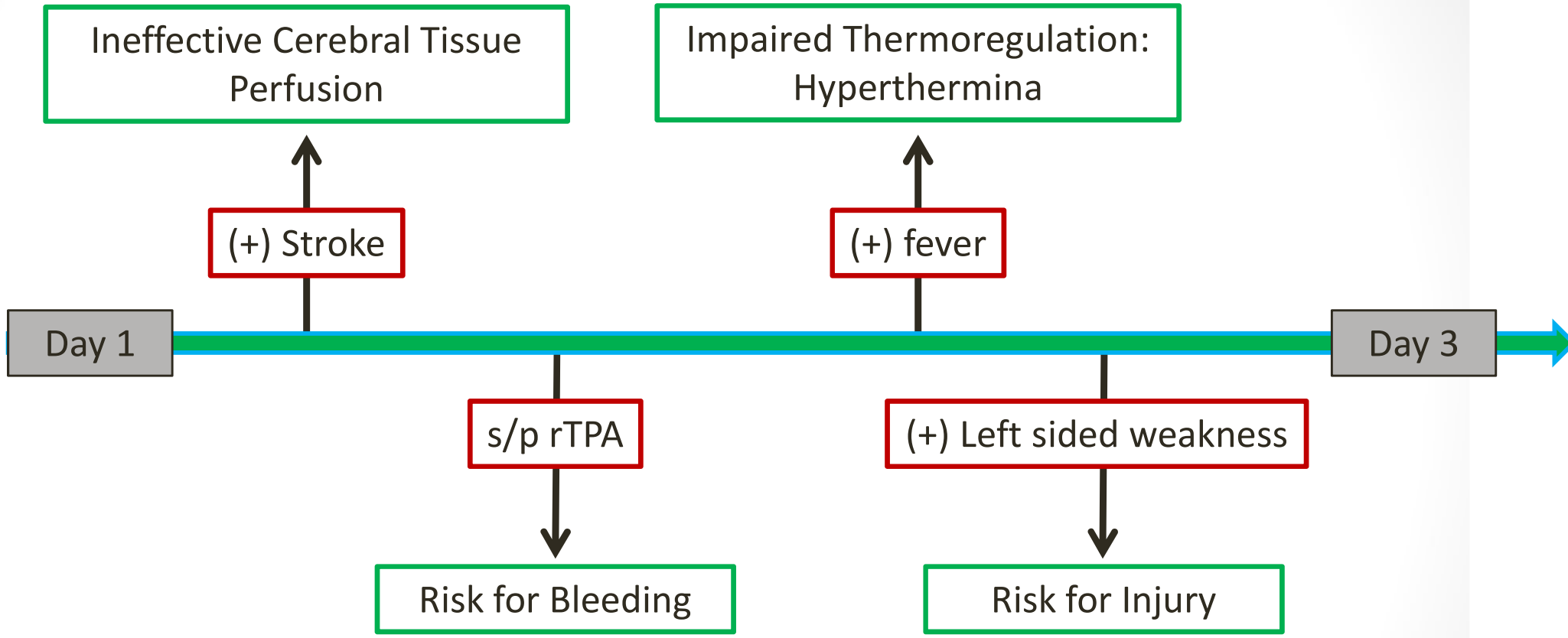
Indication: Fever Control

Para (500mg) 1 tab oral PRN

W/o for GI upset

Case of Patient YXZ

NURSING CARE PLANS



Case of Patient YXZ

NURSING CARE PLANS

Ineffective Cerebral Tissue Perfusion
2⁰ to impaired blood flow

(+) Stroke

Plan

Effective Tissue
Reperfusion within
hospital stay

Evaluation

- (-) Dysarthria
- Motor function 5/5
- For home

Day 1

Day 3

(+) Dysarthria

(+) L Sided Weakness

Nursing Interventions

- Close neurological monitoring including LOC, GSC, Seizure, etc
- Monitor VS especially BP, pupillary reaction
- Provide bedrest, flat on bed
- Provide a relaxing environment

Nursing Interventions

- Monitor client during rTPA therapy
- Administer oxygen as needed
- Administer medication as needed (Clopidogrel, simvastatin)

Case of Patient YXZ

NURSING CARE PLANS

Nursing Interventions

- Close neurological monitoring including LOC, GSC, Seizure, etc
- Monitor VS especially BP, pupillary reaction
- Watch out for sign of bleeding, monitor bleeding panel per laboratory
- Avoid catheter and/ or NGT insertion
- Ascertain repeat CT scan after rTPA therapy

Day 1

Day 3

s/p rTPA

Risk for Bleeding
secondary to rTPA
therapy

Plan

No incident of
bleeding within
hospital stay

Evaluation

No incident of
bleeding within
hospital stay

No intracranial
bleeding on CT Scan

Case of Patient YXZ

NURSING CARE PLANS

Impaired Thermoregulation: Hyperthermia related to infection process

39.5 C

(+) fever

Warm

Day 1

Day 3

Plan

Decrease body temp within normal range after intervention

Evaluation

Temp: 37.5 after 1 day

Nursing Interventions

- Hourly monitoring to body temp
- Provide adequate fluid intake
- Render TSB
- Provide comfort measure
- Adjust environmental temperature

Nursing Interventions

- Administer paracetamol 500 mg PRN
- Administer Ceftriaxone as ordered
- Monitor for allergy for antibiotic

Case of Patient YXZ

NURSING CARE PLANS

Nursing Interventions

- Promote bedrest, side rails up
- Assess for fall risk every shift
- Keep patient bed near nurse's station
- Instruct on use of call button
- Place patient things within his reach

Day 1

Day 3

Plan

No incident of injury within hospital stay

Evaluation

No incident of injury within hospital stay
For home (20 Jan)

(+) Left sided weakness

Risk for Injury

4/5 on left side

77 y/o

(+)
Stroke

Case of Patient YXZ

DISCHARGE PLANNING

D M E T H O D

Discharge planning process should be initiated as soon as possible after patient admission

ER Admission

CT Scan

Stroke Unit

Discharge
20 Jan 2017

Day 1

Day 2

Day 4

RCKP Martinez, PhD, RN

Case of Patient YXZ

Discharge planning process should be initiated as soon as possible after patient admission

D M E T H O D

Diagnosis: Ischemic Attack

Focus on prevention; causes and early identification of s/sx

ER Admission

CT Scan

Stroke Unit

Discharge
20 Jan 2017

Day 1

Day 2

Day 4

Case of Patient YXZ

Discharge planning process should be initiated as soon as possible after patient admission

D M E T H O D

Medication: Continuity

Emphasize proper taking of medication with 5 R's. Emphasize that maintenance should NEVER be discontinued as well as it's side effects

ER Admission

CT Scan

Stroke Unit

Discharge
20 Jan 2017

Day 1

Day 2

Day 4

Case of Patient YXZ

Discharge planning process should be initiated as soon as possible after patient admission

D M E T H O D

Environment: Prevent Injury

Modify home to promote safety such as on-slipping floor ' installation of side rails to normal bed and hand rails to toilet

ER Admission

CT Scan

Stroke Unit

Discharge
20 Jan 2017

Day 1

Day 2

Day 4

Case of Patient YXZ

Discharge planning process should be initiated as soon as possible after patient admission

D M E T H O D

Treatment: Rehabilitation

Emphasize need for continued home exercise (ROM exercise) and follow up with physiotherapist. Encourage family to provide emotional support

ER Admission

CT Scan

Stroke Unit

Discharge
20 Jan 2017

Day 1

Day 2

Day 4

Case of Patient YXZ

Discharge planning process should be initiated as soon as possible after patient admission

D M E T H O D

Health Promotion: Prevention and Lifestyle Modification

Focus on teaching family members FAST algorithm. Promote family involvement in patient care

ER Admission

CT Scan

Stroke Unit

Discharge
20 Jan 2017

Day 1

Day 2

Day 4

Case of Patient YXZ

Discharge planning process should be initiated as soon as possible after patient admission

D M E T H O D

Out Patient: 2 weeks after

Emphasize need for follow up as advised by physician and never to miss any appointment

ER Admission

CT Scan

Stroke Unit

Discharge
20 Jan 2017

Day 1

Day 2

Day 4

Case of Patient YXZ

Discharge planning process should be initiated as soon as possible after patient admission

D M E T H O **D**

Diet: Low Salt, low fat, fiber rich

Encourage family members to prepare foods as mentioned above to control BP, Dyslipidemia and promote bowel movement

ER Admission

CT Scan

Stroke Unit

Discharge
20 Jan 2017

Day 1

Day 2

Day 4

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ขอบคุณมาก អរគុណ

Thank You

cảm ơn bạn *Salamat*

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ResearchGate: <https://goo.gl/dNr2Zs>

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