Please note – this learning resource has been produced by the GUMS Academic Team. It is possible that there are some minor errors in the questions/answers, and other possible answers that are not included below. Make sure to check with other resources.

**Key elements of the answers are bolded. Everything else is important but not the focus of BMB.**

**CASE 1 – Stroke**

You are an intern working in the Emergency Department. A 65 year old gentleman, Mr Tom Lysis, presents to ED with his wife at 7pm following new onset weakness in his face and arm on the right side of his body.

1. What do you immediately do?
2. What is the rationale for doing an ECG in stroke?
3. List some differential diagnoses.
4. Take a brief history of the patient and his wife. State what you would examine. *[Mentor to provide answers to hx questions.]*
5. Based on this information, state the most likely affected artery.
6. What is the specific scan you NEXT order and what is the SINGLE most important reason for this scan?
7. Comment on the findings in the CT below and state what you would look for in the plain CT.



**\*\*see amboss - ischemic stroke (diagnostics) for some more interpretation with images\*\***

1. A picture containing map

   Description automatically generated*The next part is for interest:* What further imaging would you perform? An example is shown below.

*Note: this happens as part of the work up for stroke in established centers, but it is unlikely this would be tested in BMB.*

1. If the patient’s scan had evidence of mostly necrosed tissue, would you lyse them?
2. Which of the following is NOT a contraindication for thrombolysis
   1. Intracranial haemorrhage on imaging
   2. Previous stroke within last 3 months
   3. Active bleeding
   4. Uncontrolled Hypertension of 150/90 mmHg
   5. Hypoglycemia
3. You decide to thrombolyse Mr Tom Lysis (why?). How do IV thrombolytic agents such as alteplase work?
   1. What are the main complications?
   2. What are the indications for a mechanical thrombectomy as a reperfusion option? What is it?

\*\*\*

Thrombolysis is done, but the intern who did it was from UQ and accidentally gave them heparin instead. They infarct.

To summarise, their signs are:

* Paralysis of right face and arm but not leg
* Can’t look right (looks towards the side of the lesion i.e. can only look left, but not right)
* Can’t get words out but understands commands

1. Name the precise MCA branch involved.
2. What structures have been affected? What else does the examiner have to look for (although given that he has aphasia, he can’t tell you this sign!)? Assume the left hemisphere is his dominant.
3. If it was a left inferior division infarct, what structures and signs could have been involved/seen? How about an M1 infarct?

**WHAT IF’S …..**

1. **What if** the patient had evidence of swelling and ipsilateral mydriasis? What other signs could they develop if this was not treated?
2. **What if** Mr Thom Lysis came in with a headache that was worsening within minutes and he was also vomiting?
   1. What risk factor does Mr Lysis have for this? -
   2. List other possible causes
3. **What if** it was an ACA stroke? List clinical features.
4. **What if** you identified Mr Tom Lysis had underlying atrial fibrillation…
   1. How do you decide if you need to anticoagulate the patient?
   2. Complete the following table in relation to options to anticoagulate a patient with Atrial Fibrillation.

|  |  |  |
| --- | --- | --- |
|  | Warfarin | DOACs |
| MOA |  | *Dabigatran****:***  *Rivaroxaban, apixaban:* |
| Use in AF |  |  |
| Advantages |  |  |
| Disadvantages |  |  |

**CASE 2 - Head Injuries**

24 year old Rona Vires is brought into the ED after getting into a fight over toilet paper outside his local Woolworths. He appears to be disoriented, and there are cuts and bruises all over his face and he is bleeding. The Paramedics give you a handover which reveals he was punched in the jaw several times before he fell onto the cement face first.

1. What are the first steps in managing this patient?
2. What are you looking for in a cranial CT in head traumas?

Rona is taken in for a CT scan (image shown). Upon further physical examination you notice that he has bruising around the eyes (show below), has rhinorrhea and there is A close up of a person's face

Description automatically generatedstaining on the bed sheets (see below).

A picture containing black, white

Description automatically generated

Image from: radiopedia - base of skull fractures

1. Describe the findings on the bed sheet (see image). What is A picture containing text, red, sign, blurry

   Description automatically generatedits significance?

1. What is the anatomical reason behind him getting the racoon eyes?
2. What fracture does Rona most likely have?
3. Describe the difference between simple and compound fractures and its significance.

**What Ifs**

1. **What if** Rona presented with dysphagia, loss of gag reflex, weakness of the sternocleidomastoid and trapezius muscles?

**Please provide feedback for this case at:** [https://forms.gle/R64a83Cf7UgRYc168](https://forms.gle/R64a83Cf7UgRYc168?fbclid=IwAR2IJMsL2N2nkuJ3T7Dh-1XAPZthHc-uun2qlesNUR0AaT4lPut1r5BKg6E)