

71-year-old lady elective admission to the orthopedic service for elective TKR coming morning. You are the house-officer on call and was called by the nurse to review patient has she appears to have sudden onset right sided weakness. Patient is sleepy but arousable with right hemiparesis. She said she woke up with the weakness and nurses confirm that patient well 2 hours ago before her nap.

Background history include hypertension, hyperlipidemia, diabetes, atrial fibrillation and previous history of NSTEMI 10 years ago. She is taking perindopril, bisoprolol, glipizide and warfarin. She stopped warfarin 5 days ago.

On examination patient had right upper motor seven nerve palsy and right sided weakness with a power of 2/5 in both upper and lower limbs

You have informed your registrar whom instructed you to order an urgent CT brain.

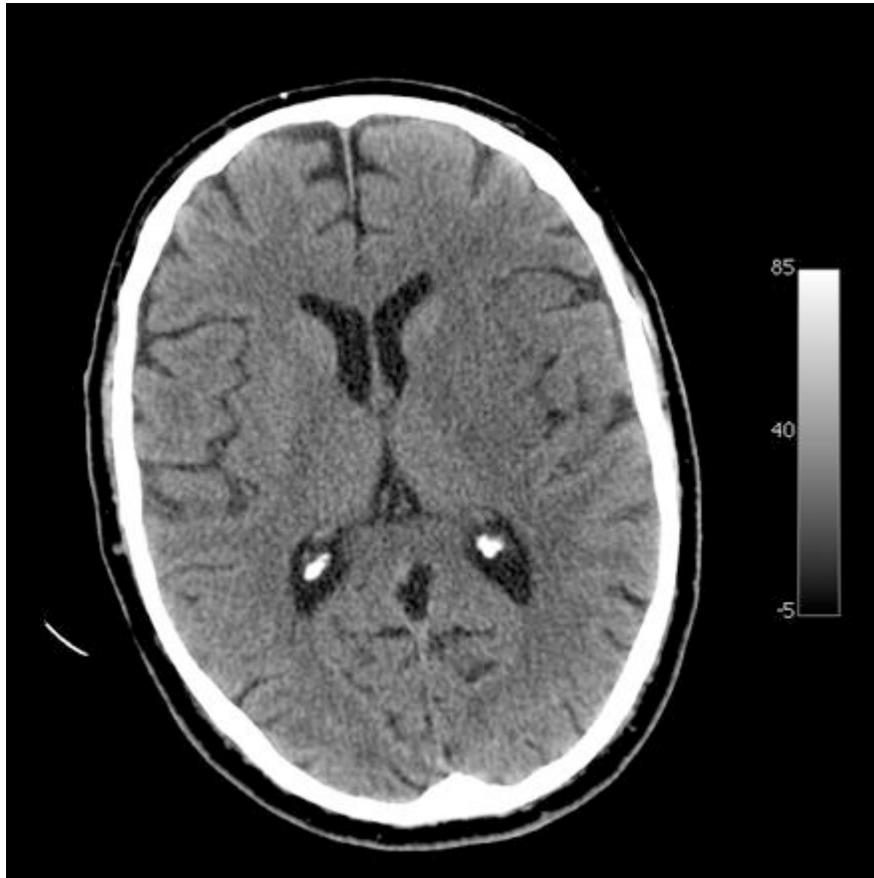
Which of the following will be the most important initial investigation?

- 1) PT-INR
- 2) **Hypocount**
- 3) FBC
- 4) ECG
- 5) CXR

This is the type of question that frustrates people in the exams. Most people will argue what does this test, most of us will do all if not most of the above test anyway. Unfortunately, YLL likes to set such questions. PT-INR is a commonly selected option as people believe that its important in determination of thrombolysis. However, do realize that exclusion of mimics given that she is a diabetic patient is most important before considering treatment of stroke. Moreover, it's unlikely although not impossible that INR is more than 1.7, if patient has truly stopped taking warfarin for 5 days. FBC usually done to look at Hb and platelet levels before starting thrombolysis.

You performed a stat hypocount which showed a serum glucose of 4.1. And sent off FBC, PT-INR and performed an ECG

The following was the CT brain of the patient:



What is the abnormality in this CT-brain

- 1) Intraventricular haemorrhage
- 2) Dense artery sign
- 3) Sulcus effacement
- 4) **Loss of insula ribbon**
- 5) No abnormality with no evidence of bleed

A question similar to this has come out before and do remember that CXRs, ECGs and CTs can come out for the MEQs as it's a computer examination. The hyper dense findings in the lateral ventricle is just calcification of the choroid plexus which occurs with aging and is a normal finding. Plus does intra-ventricular hemorrhage give such a clinical presentation?

The patient's blood results are out Hb 13.2 TW 10 Plt 150 PT 15 INR 1.3. Your registrar after discussion with patient and family decides to perform thrombolysis. Patient has some neurological recovery and you review her 4 days later during your rounds.

The patient's daughter tells you that given her mother's deficits it will be difficult for her to bring her mother to clinic regularly for INR check is requesting that she is changed to other medications.

You decide to

- 1) Start patient on aspirin but warn daughter that the protection is sub-optimal
- 2) Insist that patient continue on warfarin as this valvular AF and that's the only sure treatment
- 3) Stop warfarin without starting antiplatelet as it wouldn't protect patient anyway
- 4) Start patient on Plavix in place of warfarin
- 5) **Discuss with patient the use of dabigatran**

As students we all hated questions like these. But do realize that YLL likes to test the new things in medicine that everyone in the wards is taking about. NOACs quite commonly used and most of your seniors notes have become outdated with respect to this. Also note that in valvular AF, only warfarin is an option but in the stem I did not mention anything suggestive of valvular AF.

During the inpatient stay the patient is pre meal glucose values remain 9-11. Your orthopedic consultant asks you which anti-diabetic medication is shown to provide mortality benefit for this patient's cardiovascular risk factors

- 1) **Dapagliflozin**
- 2) Insulin
- 3) Metformin
- 4) Linagliptin
- 5) Sitagliptin

Again another factual question on a new drug on the market. Sodium glucose transporter 2 inhibitor. This class of anti-diabetic is the only class of medication that reduces mortality with respect to cardiovascular mortality. Its increasingly common in Singapore.

After eliciting further history that patient has recurrent history of UTI. You decide to start the patient on metformin. You calculate patient's creatinine clearance which come to 39.

What is the maximum dose of metformin can you start?

- 1) 850mg TDS
- 2) 850mg BD
- 3) **500mg BD**
- 4) 250mg BD
- 5) 1000mg BD

Metformin is a commonly prescribed medication and its use in renal impairment is something you will need to be aware of. Commonly the maximum dose is 850mg TDS. However, in patients with Crcl between 30 to 60 most recommendations will advise cutting the dose by 50% or maximum of 1000mg per day.

Patient recovers and goes home with day rehab. You see her back in clinic 3 months later. You note her pre clinic blood test Hb is 10 MCV 90 TW 8 Plt 150. INR 2.6. She is functionally well ADL independent.

What is the most important next investigation you would offer?

- 1) B12 and folate
- 2) Iron panel with ferritin
- 3) Stool Occult blood
- 4) **Endoscopy and colonoscopy**
- 5) CTAP

I truly hate this kind of question. As almost everyone knows how to handle such patients but the question asks which is the most important which leads to endless philosophical debates. The argument the school gives us is that, ultimately the most sensitive and specific test that excludes or includes our worrying diagnosis of bleeding or malignancy is scopes and hence it's the most important investigation.