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.

**1. Jake Peralta walks into the ED with acute onset shortness of breath. Which of the following additional bits of information would make you MOST concerned about a pulmonary embolism?**

1. Takes 100mg aspirin daily
2. Has atrial fibrillation
3. Has a factor V leiden mutation
4. Has had recent surgery
5. Has an abnormal chest xray

**2. You’re taking a history in ED from a patient, Amy Santiago, who presents with unilateral calf pain of 1 day duration. Describe Virchow’s triad and then list how the following risk factors may affect the components of the triad.**

**Components of Virchow’s triad:**



|  |  |  |
| --- | --- | --- |
|  | **Effect on Virchow’s triad** | **Explanation of how the factor affect Virchow’s triad.** |
| 1. **Being pregnant** |  |  |
| 1. **Having recently been on a long-haul flight** |  |  |
| 1. **Taking an ACE inhibitor** |  |  |
| 1. **Taking the oral contraceptive pill** |  |  |

**3. Platelets can do all of the following EXCEPT:**

1. Adhere to injured vascular walls
2. Convert fibrinogen to fibrin
3. Induce vasoconstriction
4. Provide a surface for coagulation to take place
5. Release substances that neutralize heparin

**4. On the same day as Jake and Amy, Charles Boyle, a detective, presented with sudden onset shortness of breath on day 2 after a total knee replacement. Your colleague (who went to an inferior medical school) decided to order a D-dimer test to investigate the possibility of a venous thromboembolism. Why is this a silly idea?**

**5. Charles then decides to ask you about why he was getting a DVT in the first place? Strangely, Charles is very interested in the roman numerals of the clotting cascade. Describe in layman’s terms to Charles (non-science background), haemostasis and the key aspects of the clotting cascade.**

**6. Yet another patient (it really is a busy day), Scully, presents to the ED. Scully is a 73 year old man who has recently had his first ischaemic cerebrovascular accident (stroke). Your colleague wants to start him on warfarin to prevent more clots in the brain but you think that aspirin is more appropriate. Why is your colleague wrong (again)?**

**7. Your final two patients of the day are a father, Terry Jeffords (35 years old) and his daughter Ava (1 year old), both present with signs of bleeding disorders, however, with some key differences,**

**Terry presents with petechiae and reports of continuous bleeding for 10 minutes after a small cut on his finger.**

**Terry reports his daughter bruises easily and upon a small fall developed what looks like a haematoma.**

**On further questioning Terry reports having a severe flu several weeks prior, however there is no further relevant information.**

**Discuss the key differences in presentation between patients and what investigations you would be thinking of (HINT: This question involves the entire haemostasis process)**

**Please provide feedback for this case at:**

**<https://forms.gle/Jm1kWoZ73gAV9a6V9>**