Student Instructions

Ian is a 25 year old man who has re-presented to A&E following a recent discharge from hospital with loose stools. Please take a history and perform an appropriate examination on him.

Patient Instructions

You're normally a fit and active go-getter who is looking to take the world by storm with the new technology company you've just set up. You want to get better so that you can keep moving forward. In fact, your mantra is time's arrow marches forward but at the moment you feel stuck on pause. Diarrhoea in particular is limiting your ability to work and you're feeling run down. You're concerned something really bad is going on and that's why you've had a double whammy of infection. However, you are also worried that you might be brewing a superbug. You're really just expecting a bit of reassurance and possibly some more antibiotics before being sent home.

You came into hospital about three weeks ago with a really nasty pneumonia which was treated with antibiotics. They were through the drip for a full two weeks. The names of them are unclear but you think they were something like amoxin something and ciprofloxin or something. You felt a lot better and were discharged home. However, yesterday (five days after leaving hospital) you started to get really painful stomach cramps and watery diarrhoea

The stomach cramps are mostly in the middle and come in waves. It feels like a cramping pain which doesn't improve when opening your bowels. It doesn't travel anywhere, staying in the middle of your tummy. You've also noticed loose stools, rigors and fever (up to 39C)

The diarrhoea is mostly watery with no blood or mucus in it. You go up to 6 or 7 times a day and feel it is a large volume. You would describe it as severe and it is taking a toll on your life. You've also recently noticed you're more thirsty, feeling lethargic and light-headed at times.

No other medical conditions. NKDA. You had two weeks of antibiotics at your recent acute admission (in a drip, something like amoxin and ciprofloxin).

No recent travel.

You have had a single monogamous male partner for 5 years with whom you have oral and anal sex. You have not had any other partners in this time and have no reason to believe he has either. Your last STI screen was a year ago and was negative.

You've just set up a tech company which you're hoping is going to propel you upwards first to London and then to Silicon Valley itself. You're running it with your partner at the moment who you live with. You're a non-smoker and rarely drink alcohol. You do not take any recreational drugs ("I say no to drugs just like my mother would want"). You're normally fit and well, in your free time you rock climb and do Park Runs.

Examiner Instructions

When prompted on differential diagnoses the patient should list Clostridium difficile infection high on the list (bonus points if they specify pseudomembranous colitis). They may also wish to mention HIV either as a single diagnosis or as a predisposing factor for C. diff. Further bonus points for mentioning Cryptosporidium, Isospora or Cyclospora infection Other differentials include viral gastroenteritis or bacterial gastroenteritis (for example, Campylobacter, Salmonella or Shigella).

The majority of the final 6 minutes should be questions regarding antibiotic stewardship. Here are some examples (with answers!):

What are some examples of good practice when prescribing antibiotics: Start broad but narrow when a source has been identified or a culture is positive. Prescribe with an end date or a review date to prevent it for going for longer than needed. Change to oral antibiotics when possible.

What are some risk factors for C. diff infection: Age, antibiotic exposure (any), specific antibiotic use (clindamycin, quinolones, macrolides), immunodeficiency, nastogastric tube, severe/multiple comorbidities, non-surgical invasive gastrointestinal procedures, prolonged duration of hospital stay and inpatient residence on ITU.

List some infections related to inappropriate antibiotic use: C. diff, MRSA, Carbapenamase-Producing Enterobacteriaceae, Vancomycin-Resistant Enterrococci.

If they do really well on the above ask this question (this is more about reasoning and showing extended working):

Outside of antibiotic stewardship how do we solve the growing crisis of antibiotic resistance? Points awarded for mentioning/discussing:

Improving hygiene (surfaces, tools and personal)

Legislation limiting the use of antibiotics for growth in farming

Improved monitoring of antibiotic quality

Increased action against antibiotic counterfeiters

Improved monitoring of resistance patterns for targeted prescribing advice

Audit of prescribing practices for improvement

Increased research into novel antibiotic categories

Improved isolation practices

Increased education, particular about patient beliefs and expectations on antibiotics (for example, IV antibiotics aren't always better, viral infections don't need antibiotics)

MULTIDISCIPLINARY APPROACH! Involving healthcare staff, legislators, the media and the public.