Case 1

A 77 year old man with past medical history significant for dementia, hyperlipidemia, coronary artery disease (CAD), s/p coronary artery bypass graft (CABG) and aortic valve replacement (AVR) who was referred to the Memory Clinic for agitation.

He started having memory problems which worsened significantly later after his CABG and AVR. At the time he presented to the clinic, he had functional deficits in the following instrumental activities of daily living (IADLs) – handling finances, driving, cooking and shopping. The patient was noted to be easily agitated and irritable for some time, and was referred to the Memory Clinic for exhibiting verbal and physical aggression towards his wife as well as others. The patient was recently seen by his primary care physician for this issue, and all of his laboratory exams were normal, and subsequent MRI of the brain was also unremarkable.

The patient noted good appetite and denied problems with sleeping or weight changes. He also denied any suicidal ideations and visual/auditory hallucinations. However, he stated that he was depressed because he was worried about his memory problems.

Questions:

- ***Explain the Diagnosis of Depression in Patients with Dementia***
- ***Mention the pharmacological &Non-pharmacological Intervention should be followed***

Case 2

Patient X was admitted to the psychiatry unit after being treated for a self-inflicted gun shot wound. He is a male, in his mid-fifties, lives with his wife. He completed high school and one year of college, and then started farming, where he had experienced crop failure for 3 consecutive years; he is deeply in debt now, and in danger of going bankrupt. He is obese, and diagnosed with type II diabetes about 10 years ago, he was also diagnosed with hypertension, and hyperlipidemia. He has been taking insulin injection, lovastatin, furosemide, atenolol, and amitriptyline (Tricyclics) since that time. He suffers from sleep disruptions, loss of interest, he quit any exercise, and he drinks and smokes a lot. Lastly, episodic bradycardia had been diagnosed last year.

Questions:

1- What does this patient suffer from?
2- Define hyperlipidemia?
3- What is the difference between type I and type II diabetes?
4- What is lovastatin, furosemide, and atenolol used for?
5- What is episodic bradycardia?

Case 3

An 8 years old girl is brought in by her mother for evaluation of allergies. Each year in the spring the child develops a runny nose; itchy, watery eyes; and sneezing. She has been treated in the past with diphenhydramine, but the child teacher says that she is very drowsy during school. She has no other medical problems and is on no chronic medications her examination is unremarkable today. You diagnose her with seasonal allergic rhinitis and prescribe fexofenadine.

1. **Questions:**
2. What is the mechanism of action of antihistamine medications?
3. What are the common side effects of antihistamine medications?
4. What is the pharmacological basis of switching to fexofenadine?

Case 4

Mrs Q is a 37-year-old woman who comes to your pharmacy with a prescription for Predsol enemas, one daily for four weeks. She tells you that she has recently been diagnosed with ulcerative colitis and that this is her first prescription for an enema. She says she would really rather have tablets but the doctor suggested that an enema would be more appropriate for her.

Questions:

1. What is ulcerative colitis?
2. What is the aetiology (cause) of ulcerative colitis?
3. What sort of patient most commonly develops ulcerative colitis?
4. What is the active ingredient of Predsol and what class of drugs does it comefrom?
5. How do these drugs exert their action in conditions such as ulcerative colitis?
6. What are the adverse effects of this type of drug?
7. Why do you think Mrs Q has been prescribed an enema rather than tablets?
8. What formulations of prednisolone are available which Mrs Q could self-administer?
9. Describe the advantages and disadvantages of these formulations?
10. What counselling points should you make to Mrs Q about how to use herenema?

Case 5

A mother and her 6-year-old son present a post-dated prescription for penicillinV syrup 250 mg q.d.s. × 10 days and ask to speak to the pharmacist. The childis irritable, complains of pain when swallowing and appears flushed. Themother is anxious to start antibiotic treatment straight away so that her son canget back to school and she can get back to work, but the prescription is not validfor 3 more days.

QUESTIONS:

1 What are the causes of sore throat and how are they differentiated?

2aWho is at risk of sore throat and how common is it?

2b How serious is acute throat infection?2c Are antibiotics effective for the treatment of sore throat and for how long shouldyou treat?

2d When are antibiotics indicated for the treatment of sore throat?

3a What group of drugs does penicillin V belong to and how do they work?

3b What are the side-effects of penicillin V?

3c What are the alternatives to penicillin V for treatment of sore throat?

4a What is the oral bioavailability of penicillin V and what is the impact of administration with food?

4b What are the storage conditions and shelf-life of penicillin V oral solution?

5a What are the disadvantages of prescribing antibiotics for sore throat?

5b How should this patient's mother be counselled regarding the post-dated prescription and symptom relief?

Case 6

Mrs. Clark is 45 years old female who presents to your pharmacy with a prescription for two different antibiotics and a proton pump inhibitor. She visited her physician after experiencing frequent burning abdominal pain and a bloating sensation for a couple of weeks. She described that her pain worsened after eating, and that OTC antacid medications only relieved her pain temporarily. After performing some tests she was diagnosed with peptic ulcer.

Questions:

1. What is peptic ulcer, and what are its main symptoms?
2. What are the causes of peptic ulcer, and what are the possible complications if left untreated?
3. How is peptic ulcer diagnosed?
4. Based on Mrs. Clark prescription, what is the cause behind her disease?
5. What is the appropriate treatment approach for peptic ulcers?
6. What is your advice for Mrs. Clark about lifestyle changes for reliving peptic ulcer?

Case 7

Mrs Smith, who is 35-years-old, comes into your pharmacy with her 1-year-old daughter and gives you a prescription for levothyroxine 50-microgram tablets take one daily. This is the first time she has taken the drug. She has gained a lot of weight since the birth of her daughter and has not been able to shift it even by sticking to a calorie-controlled diet. She feels cold all the time, even on a hot day, and her hair is thinning. She has no energy at all, whereas before the birth of her daughter she used to go to aerobics at least three times a week.

Questions:

1. What do the patient's signs and symptoms indicate?

2. What are the possible causes of the disease?

3. What blood tests would she have for this condition?

4. What monitoring is required for this condition?

Case 8

Mr KM is a 49-year-old man who has been diagnosed withasthma since childhood. He also suffers from allergic rhinitiswith symptoms following exposure to grass pollen in the earlysummer. He is also allergic to cats. Over the past 2 years hisasthma has been steadily deteriorating with a marked reductionin his ability to walk without becoming breathless. He nowexperiences daily symptoms and is woken up at night severaltimes a week with shortness of breath which is temporarilyrelieved using a salbutamol inhaler. His current medication is:Salbutamol DPI 200 µcg when required (currently using threeor four times every day)Seretide-250® evohaler® 2 puffs twice dailyMontelukast 10 mg at nightAminophylline m/r (Phyllocontin®) 450 mg twice dailyHe has had five exacerbations in the past 18 months, requiringhospitalisation. His last admission was 1 month ago with a severeexacerbation requiring a short period of ventilation support.He was discharged with a course of prednisolone 40 mg dailyfor 14 days but has had to continue taking prednisolone andcurrently takes 10 mg daily.

Questions:

1. At which step of the BTS/SIGN guidelines is Mr KM, and what ishis likely diagnosis?

2. What should be the next step in his management?

3. Is there a link between asthma and allergic rhinitis?

4. Mr KM has a positive skin prick test for animal dander and hisIgEtitre measures 425 IU/L. Is Mr KM suitable for treatment foromalizumab and, if so, for how long should this be given?