

Patient Data Sheet

- Patient Name: Mr. Steve Allen
- Clinical Settings : Emergency Room
- CC: A 32 years old male presented with headache and fever.

> Vital Signs:

- Blood Pressure: 128/86 mm Hg
- Respirations: 16 per minute
- Temperature: 102.1 °F
- **Pulse**: 110 bpm
- **Height**: 72 inches
- **Weight** : 164 lbs.
- **BMI**: 22.2 kg/m²

Differential Diagnosis

- Meningitis
- Encephalitis
- Sinusitis
- Subarachnoid Hemorrhage
- Migraine

Key points to remember

- You should have patient name, vitals and chief complaint.
- Try to remember differential diagnosis and think about what questions you can ask.
 - 1. Meningitis
 - 2. Encephalitis
 - 3. Sinusitis
 - 4. Subarachnoid Hemorrhage
 - 5. Migraine

Main system is CNS-write down its mnemonic.

Opening of the case

Position of the patient.

- Patient might be sitting on the bed with one hand on head due to pain.
- Patient might be little drowsy/confused to show you that he has some altered mental status.

Room environment.

• The patient might have photophobia, so he wants dim light instead of regular bright light so ask him about his preferences.

How to make patient comfortable

- Introduce your self.
- Shake hands.
- Explain what are you going to do in next 14 minutes.
- Offer help if they need.
- Dim the lights if patient prefers.
- Re-assure that you will be quick and give him pain medication ASAP.

Subjective

- Mr. Allen, Good morning. I am Dr. Smith. Today I will take care of you. First I will ask you few questions and do brief physical examination. I know you are in pain, so I will finish it very quickly.
- Doc, I am in pain, please give me something. It's terrible.
- I understand you are in pain but to give you right pain medication I need to know what is exactly causing your pain. So let me ask you few questions. Is that ok with you?
- Ok doc.

(Here, you should drape patient. It has one tick mark on patient's list).

- What brought you in today?
- Doc, I have severe headache and fever for 2 days.

Contd...

- Tell me where you feel pain.
- It's all over my head.
- How severe is it on the scale of 0 to 10 with 10 being most severe pain?
- It's about 8/10.
- Is it constant or comes and go?
- It's constant.
- Does anything make it worse?
- I cant bear bright light and loud noise, doc.

- How high was your fever?
- It's about 102 °F yesterday.
- Have you taken any medication for it?
- I took Tylenol but it did not help me.
- Do you feel stiff neck?
- Yes, since yesterday, I have difficulty moving my neck.

Associated symptoms:

- Have you had any abnormal movements?(seizures- more in Listeria).
- No doc.

- Have you had any weakness? (focal neurological signs).
- No doc.
- Have you noticed any changes in sensation over your body?
- · No.
- Have you noticed any difficulty hearing?
- No.
- Any difficulty seeing?
- No doc.

- Do you have any rash? (meningococcal meningitis).
- · No doc.
- Have you lost consciousness?
- · No doc.
- Have you had any recent trauma or operation of your head?
- · No.
- Have you traveled recently?
- I went to Mexico last month.

- Do you have any sick contact?
- My child had pneumonia last week.
- Do you have any other symptoms, such as nausea/vomiting?
- I felt nauseous this morning but no vomiting.
- Any Chest pain- No.
- Belly pain- No.
- Have you noticed any change in urination?
- No.
- How is your bowel movements?
- It's fine.

PMH

(You should use transition sentence here. Such as,).

- Mr. Allen now I would like to ask you few questions about your health in the past.
- Have you had similar complaints in the past?
- · No.
- Do you have any medical conditions such as high blood pressure?
- No.
- High blood sugar ?
- No.

Contd...

PMH and Medications

- High blood cholesterol?
- No.
- Do you have history of any surgery?
- · No.

> Medications:

- Tell me which medications you take including over the counter medications?
- Some time Tylenol.

Allergy and Social History

>Allergy:

- Do you have any allergy to medications or foods
- Sulfa drugs, it causes rash.

>Social History:

- · I would like to ask you few questions about your social habits.
- Do you smoke?
- No.
- Do you drink alcohol?
- Yes.

Social History

- How much do you drink?
- I don't drink everyday. 1-2 beers on the weekend.
- Do you take any recreational drugs?
- I tried cocaine during high school.

(It is time to appreciate patient's right health decision).

• I am glad you quit.

(You should also ask about use of any recreational I.V. drug recently. If it is, then likely organism could be Staph.)

Family History

- Mr. Allen, Now I would like to ask you few personal questions. I assure you that all information will be kept confidential.
- Are you sexually active?
- Yes, with my wife only.
- What kind of work do you do?
- I am banker.
- **Family History:**
- Now, I would like to ask you few questions about health of your family members.

Summary of History

- Does any body in your family have any medical problems?
- Yes, my father died due to brain tumor and my mother has asthma.
- I am sorry to hear that, Mr. Allen. (now, you are done with history. It's time to summarize main pertinent points).
- · Mr. Allen, I am done with history. Let me summarize for you.
- You have headache, that is all over your head and 8/10 in severity and fever of 102 °F for 2 days. You also felt a little sick yesterday.
- Do you have any questions?
- Not at this time.
- · Okay I will now wash my hands and examine you.

Points to remember before starting Physical Examination

- Wash your hands.
- Always make patient comfortable.
- Ask permission to examine.
- Do not repeat painful maneuvers.
- Use proper draping techniques.
- Provide help during examination.
- Explain what you are doing.

Focused Physical Examination

- In this case, you need to focus on CNS examination.
- Start with CNS.
- Cranial nerves.
- Motor system.
- Sensory system.
- Nuchal rigidity.
- Fundus examination.
- (these two signs are optional).
- Kernig's sign- flexion of knee and hip at 90 degree and then try to extend knee joint.
- Positive if you feel resistance.

Contd...

Focused Objective (Contd...)

- Brudzinski's sign: patient-supine, limbs- supine.
- Positive if passive neck flexion causes involuntary hip and/or knee flexion.
- Quickly do general examination.
- Skin- look for petechiae, Maculo papular rash.
- RS and CVS examination.
- Explains, offers and performs OMM if indicated.

How to finish case

- (once you are done with your physical, give him initial impression and explain your plan).
- Mr. Allen, thank you for your co-operation. I am done with physical examination. Let me give you my impression. Based on your history and my physical examination, It seems that you have infection of the lining of your brain. We call it meningitis.
- But some other conditions may also cause such symptoms. So, to arrive at the right diagnosis, I will run some blood tests.
- You will also have an imaging study of your brain called CT scan. It is a specialized X-ray that gives clear picture of your brain. We also need to check fluids around your brain. We call it lumber puncture, in which small needle is introduced in your lower back and small amount of fluid is aspirated and it will be tested for any infection. Once I have result we will meet again, mean while I will start antibiotics and give you pain medications for your headache. You need to be admitted for investigations and treatment.

How to finish case (Contd...)

- Do you have any questions?
- Yes, Doc, Do you think it is brain tumor?
- Based on your presentation, It is very less likely that it is due to brain tumor. So let's wait for results and hope for the best. But I do want to assure you that whatever is your diagnosis, I will try my best to help you.
- · See you soon. Shake hands and leave.

Assessment and Plan:

Assessment:

- 1. Meningitis
- 2. Encephalitis
- 3. Sinusitis
- 4. Subarachnoid Hemorrhage
- 5. Migraine

• Plan:

- 1. Ceftriaxone 2 gm. IV every 12 hours and Vancomycin 30-60 mg/kg/day IV in divided doses every 8-12 hours for 7-21 days based on infectious agent.
- 2. CBC with differential, BMP, CT Head without contrast.
- 3. LP and CSF analysis, Blood C&S.
- 4. Admit to hospital.
- 5. Consult ID and Neurology.

