GUIDE ON CASE PRESENTATION

I. Introduction:

Case presentation is a presentation format preserved for junior residents (PGY1-2 in 4-year program). The main goal of a case presentation is to practice **clinical reasoning**. As a result, residents should remember to tailor the presentation to show his/her ability in approaching common symptoms in a systematic way. It is important to choose learning objectives before making the slides.

II. Structure:

1. Chief Complaint (CC):

A brief description of the chief complaint is presented here for the audience to start questioning. The amount of detail can be decided by the presenter.

For example:

- A 54-year-old man with a history of diabetes presented to the ED with 3 hours of acute upper abdominal pain.
- A 30-year-old woman presented to the clinic with headache.

Note:

- CC should be enough for the audience to start listing differential diagnoses.
- Differential diagnoses should be listed in a systematic order using **mnemonics** (for example: MIST for altered mental status), **organ systems** (for example: cardiac causes, pulmonary causes, and others for dyspnea), or **common approaches** (for example: SNNOOP10 for headache).

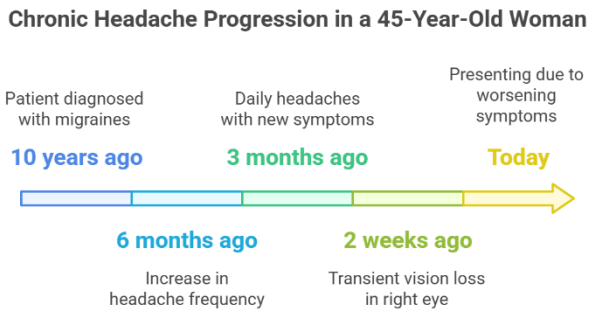
2. History of Present Illness (HPI):

The HPI includes a detailed description of the chief complaint. For chronic symptoms, a timeline should be presented (for example: Figure 1).

All characteristics of the chief complaint should be shown using common formats (for example: SOCRATES, OPQRST…).

Note:

- The presenter should also list all the pertinent negative symptoms that are associated with the differential diagnoses of the CC (for example: if the CC is headache, several important pertinent negative symptoms include limb weakness, visual changes, recent trauma, or weight loss).



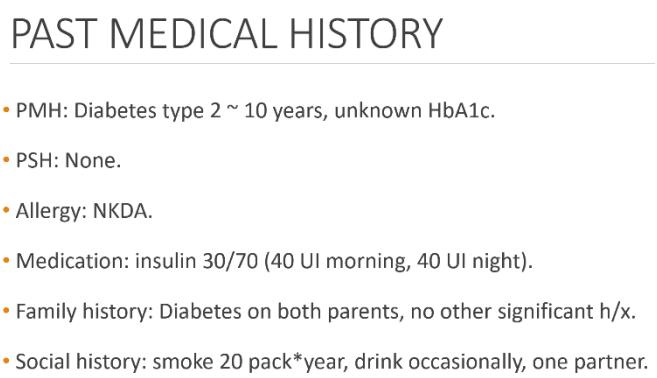
- The presenter should choose important information regarding the case to list in the HPI. Do not list as many negative symptoms as possible with no relation to the CC.

3. Past medical history (PMH):

The PMH should include at least 6 parts: past medical history, past surgical history, current medication, allergy, social history, family history (for example: Figure 2). For infectious diseases, sick contacts and travel history should also be included.

Note:

- The presenter should also include related information regarding chronic illnesses (for example: recent HbA1c for diabetes, drug regime for diabetes or hypertension…).



4. Physical examination (PE):

The PE includes vital signs, general status, and a detailed examination of related organ systems. For each organ system, the presenter should choose an appropriate amount of pertinent positive and pertinent negative physical findings that support the differential diagnoses.

Note:

- Some specific maneuvers related to the CC needs to be includes (for example: HINTS test for vertigo, rectal exam for melena, pelvic exam for abdominal pain…).

5. One-liner:

With all the information from HPI, PMH, and PE, the presenter creates a one-liner to summarize all the information of the patient. The purpose of one-liner is to list the most important information to help guide the diagnosis.

For example:

- A 65-year-old male with a history of uncontrolled hypertension (not on meds), uncontrolled diabetes (A1C 10, not on meds), smoking 40 pack*year, presented to the ED with 1 hour of acute constant 8/10 substernal squeezing chest pain, associated with stable vital signs, no fever, normal heart and lung sounds, jugular vein distension, and mild bilateral leg edema. (=> This one-liner strongly suggests ACS)
- A 40-year-old female with a history of PUD, presented to the ED with 30 minutes of sudden onset of severe constant epigastric pain, associated with fever, melena on rectal exam, and diffuse abdominal guarding. (=> This one-liner strongly suggests gastric perforation)

6. Lab tests:

Lab tests should be listed in chronological order. For example, an emergency case should have the result of arterial blood gas and capillary blood glucose first, followed by a series of complete blood count, complete metabolic panel, and appropriate imaging studies.

Note:

- The presenter can choose to show lab tests in a sequence that help the audience begins ruling in or ruling out differential diagnoses. This sequence may be different from how the lab tests were ordered.

7. Final diagnosis and follow-up:

The complete final diagnosis should be shown here. Follow-up should include the treatment regime and the patient's outcome.

Note:

- Final diagnosis needs to be complete (for example: severe pancreatitis BISAP 4 points due to elevated triglyceride/diabetes type II, community-acquired pneumonia PSI class IV).

8. Teaching points:

The presenter should choose 2-3 points that are closely associated with the case. It is important to provide teaching points regarding the case itself, not the diagnosis.

Note:

- Presenter should not provide more than three teaching points in one case.
- In general, clinical manifestations, diagnosis criteria, and treatment for common diseases are not applicable teaching points.
- For example, a case presentation of a patient with migraine should not have migraine diagnosis criteria as a teaching point. On the other hand, the presenter should find features in the patient's clinical manifestation that are not typical for migraine, or any clinical pearls provided by the case attending to use as teaching points.

III. Case preparation:

The schedule for case presentations is given to all residents at the beginning of the academic year. All residents should remember their own schedule to be well-prepared for the case presentation.

As not all cases are suitable for a case presentation format, junior residents need to discuss with any faculties from the Internal Medicine Residency for an appropriate choice of case. The timeline should be as follows:

- Two weeks prior to the presentation: consultation with IM faculty for an appropriate choice of case.
- On Friday the week before the presentation: send a draft slide to all IM faculties + assigned MD faculty + case attending for support.
- The night before the presentation: send the complete slide to case facilitators.

IV. Presentation flow:

The flow of the presentation should be as follows:

1. After the presenter shows the chief complaint, the audience starts listing differential diagnoses.
2. For each diagnosis (or group of diagnoses) listed by the residents, they also should provide clinical reasoning and further questions to clarify the priority of that diagnosis (for example: for a patient with acute dyspnea, I would think of causes from the lungs like pneumonia, pneumothorax, or pleural effusion. So, I would like to know if the dyspnea is intermittent or persistent, any association with fever, productive cough, or chest pain…).
3. After the audience asks all the important features of the chief complaint (~10-15 minutes), the presenter will summarize the list of differential diagnoses with appropriate priorities with the given information (~ top 5 diagnoses).

4. The facilitator then asks which information within the past medical history the audience wants to know to rule in or rule out the differential diagnoses. The facilitator needs to make sure the audience has asked for all the vital PMH information and then question the audience if they want to change the priority of the differential diagnoses (~5-10 minutes).
5. The facilitator then proceeds to ask which physical exam findings the audience is looking for to support their diagnosis. It is important for the presenter (and the facilitator) to guide the audience to seek important features that strongly support or reject certain diagnoses (for example, for a patient with a complaint of diarrhea, the audience should assess the severity with vital signs, especially HR and BP, skin turgor, dry mucous membrane, signs of thirst. Or for a patient with upper abdominal pain, epigastric tenderness strongly rejects the diagnosis of referred pain from acute appendicitis). This part should take 10-15 minutes.
6. After all the information from HPI, PMH, and PE, the facilitator guides the audience to provide a one-liner and a list of top 3-5 final diagnoses with priorities.
7. With these 3-5 final diagnoses, the facilitator asks the audience for specific lab tests/imaging for each diagnosis. The residents who ask for specific lab tests/imaging should also provide the rationale for performing that lab tests/imaging.
8. After the audience provides a correct diagnosis, the presenter proceeds to finish the presentation with final diagnosis, follow-up, and teaching points. If time allows, the presenter should let the audience provide their assessment and plan for the case.

V. Some notes:

1. To choose a good case for noon conferences, residents should talk ahead with CRs or faculty to select the case.
2. Keep the presentation and discussion in time.
3. Come 10-15 min earlier to prepare the slides/ project slides, etc before the conferences.
4. Encourage and promote active learning / safe environment for discussion.