

## Medical History and Physical Examinations: Tools for early diagnosis and Means to avoid unnecessary investigations

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### Abstract

**Background:** Medical history and physical examination is one of the essential skills for clinicians. Detailed and adequate history taking and physical examination usually lead to a timely and accurate diagnosis of the disease. Depending on the acquired patient history and examination findings, physician can decide to do further investigations to confirm the initial diagnosis. The primary goal of this article is to emphasize on the importance of patient history taking and physical examination during the diagnosis stage.

**Material and Methods:** Present study highlights the importance of patient history taking and physical examination via multiple medical cases apprehended by the author over a period of 2 years. Some systematic approaches are summarized as a means to use efficient history taking and proper physical examination as a strong tool of disease diagnosis. Finally, some common hinders and challenges regarding these two powerful tools in context of Bangladesh are discussed and some viable solutions are provided.

**Conclusion:** If done precisely, adequate history taking and proper physical examination can certainly protect patients from the risks of unnecessary testing. Hence, this process is cost-beneficiary, which is a great plus for the people of developing countries. Accordingly, it is of paramount importance to keep proper documentation of Patient's history and physical examination findings as well as tests and investigations done previously. Good documentation is a great resource to learn from past clinical incidents and avoid future adverse ones, hence greatly aiding in ensuring patient safety. Informative and detailed medical history along with inclusive physical examination followed by proper documentation can determine the correct diagnosis at an early stage and pave the way for an effective treatment plan.

**Keywords:** Medical history, Physical Examination, Documentation, Early Diagnosis, Cost-Effective

### Introduction

Medical history and physical examinations are essential for the diagnosis of the disease and as well as to treat the patient. The initial history and physical examination is critically important for the assessment and identifying the disease. By taking history and examine the patient, doctor gains some information which helps him to think about the disease and narrow the list of possible diagnosis the disease. This process protects patients from the risks of unnecessary testing and it is cost-effective. It is make smoother relationship between doctor and patient. It is now estimated that between 70% to 90% of medical diagnoses can be determined by the history alone [1]. Patient history and physical examination were supremely important to diagnose before advanced health technology was developed; even today, despite impressive medical

imaging and molecular tests, they remain indispensable in many contexts [2].

In 22 years of work experience, unfortunately encountered a number of scenarios where some physician are more interested to do investigation specially imaging test (USG) as a first approach, this problem is acute for the obstetrical and gynecological cases rather un-interested in listening patient history details and doing physical examination. In a consequential number of cases, Physicians were not interested to touch the patient.

Proper documentation of all the findings, tests and investigations are also important. Any medication is given this must be documented. Documents are a legal report of what happened to

the patient while taking the providers care. Good records can improve the function of the clinics and service providers and can prevent unnecessary duplication. Good documentation is a great opportunity to learn from any previous clinical incidents. From reviewing notes key lessons can be learnt. This can help prevent future adverse incidents happening and help ensure the safety of

women and their babies [3].

**In this, article some case study highlighting:** The strength of History taking and physical examination. Some unfortunate occurrences, which show doctors reluctance to do those.

### Case 1: Analysis and Discussion of Case study 1

Case Scenario	Action Taken
<p>Patient has complaint of amenorrhea for 1.5 months with Lower abdominal pain.</p> <p>She went to a gynecologist of a renowned hospital and was advised to do USG of lower abdomen. It was normal without any pathology. Then she was advised to do Bhcg which came out to be high. After that Physician was immediately advised for admission and emergency operation. However, patient &amp; her family refused to do so and thought for second opinion.</p> <p>2nd doctor took history and examined the patient properly In addition of amenorrhea she also complaining of morning sickness.</p> <p>O/E-patient looks normal, not pale, her P-80 b/min. she is normotensive, P/A findings: abdomen soft, none tender.</p>	<p>Patient was under the 2nd physician's treatment &amp; advised to continue the pregnancy.</p> <p>She delivered a male baby after 7.5 months under the supervision of 2nd doctor at term.</p> <p><b>Now mother &amp; baby both are in good condition.</b></p>

At early stage of pregnancy, gestational sac might not be found in the uterus or Sonologist might miss it. High Bhcg level (which can also occur in normal pregnancy) and empty uterus pushed the doctor (supposedly in hurry to make a diagnosis) not to think over

the clinical findings. And make a diagnosis of ectopic pregnancy. Hence, the emergency operation!!!!!! Fortunately, we avoided the unnecessary operation and the world got a beautiful little boy.

### Case study 2: Analysis and Discussion of Case 2

Case Scenario	Action Taken
<p>Patient came to the outdoor with the complaints of something coming down P/v &amp; general weakness, pain in the lower abdomen for few days. Her menstrual cycle was regular but <b>scanty</b>. She is lean &amp; thin. After proper taking of the history she said that she lost her weight with in the last few months.</p> <p><b>On general examination:</b> revealed no abnormality but weight is very low (36 kg).</p> <p><b>P/A findings-</b> NAD</p> <p><b>P/S finding-</b> Cervix -N/S, slight erosion found around the external OS, mild cystocele present.</p> <p><b>P/V examination-</b> NAD</p>	<p>Patient was advised to do CBC, urine for R/E, USG of lower abdomen.</p> <p>For scanty menorrhoea doctor advised to do MT test (thought about weight lost).</p> <p>After 3 days MT test was positive, ESR was also high.</p> <p>Patient was diagnosed as a case of extra pulmonary TB.</p> <p>And patient was referred to medicine specialist and now she is getting anti TB drugs.</p>

So Proper medical history & physical examination are very important for patient lifesaving concern and Need to correlate between history, examinations and investigations.

cervical erosion), physician thought about probable diagnosis to be genital tuberculosis. Physician advice for some investigations like blood for CBC, ESR came out to be high and MT test was positive. So, patient was diagnosed as a case of extra pulmonary tuberculosis and now she is getting anti tubercular drugs and getting better.

After proper history taking (scanty menorrhoea and weight lost) and proper examinations (patient is lean and thin; on P/S examination

From this case lesson learning is: The history and physical examination were absolutely important to diagnose the disease.

Depending on them further investigations were done to confirm it.


**Case study 3: Analysis and Discussion of Case 3**

Case Scenario	Action Taken
<p>Patient came to the hospital and consultant decided to do caesarean section due to 37 weeks of pregnancy with oligo-hydramnios with cephalic presentation.</p> <p>During operation surgeon found a scare margin on abdomen.</p> <p>Upon opening the abdomen found severe adhesion in the abdominal cavity among the peritoneum, bladder and uterus. And absence of one sided fallopian tube and ovary (H/O operation salpingo-oophorectomy).</p>	<p>With very difficulties adhesio-lysis was done. And during caesarean section bladder was injured which was repaired with the help of surgeon.</p> <p><b>Patient stayed at hospital longer than usual time and was discharged after few days.</b></p>

If doctor had taken medical history (H/O operation) and examined the patient properly he/she would have the chance to estimate the complexity of the case. And also after finding the scar margin on the abdomen they could have asked about it and find out what type of operation was done. Then, the doctor might anticipate

the adhesion and could make proper plan about the operation and operating team. **Proper history and physical examination could have aided the Doctor to better tackle the complications. The Patient could go home in due time and get relief from mental and economical disturbance.**

**Case study 4: Analysis and Discussion of Case 4**

Case Scenario	Action Taken
<p><b>Patients complaints was</b> three months amenorrhea, P/V bleeding for 6 days but excessive since last night.</p> <p>New doctor advised for USG without examining the patient and waited for report.</p> <p>During a morning ward round the patient was examined and findings were :</p> <p><b>P/S:</b> Cervix is N/S, bleedings coming through cervix, Posterior vaginal wall was swollen near about 4x3 cm from where puss like discharge was aspirated and discharge was sent for cytology.</p> <p><b>Bimanual P/V:</b> Cervix-soft, OS-tip of finger, Uterus 10 week's size, bleeding present. Palpable mass on posterior vaginal wall near about 4x3 cm, cystic in nature, slight tender.</p> <p>USG report is suggestive of incomplete abortion.</p>	 <p>Evacuation &amp; curettage was done, product of conception expelled out.</p> <p>Inoculation of cyst with capsule was done from vaginal wall which was sent for histopathology</p>


USG could diagnose the incomplete abortion but about abscess on posterior vaginal wall was difficult. Without examining the patient (The first doctor did not) we could have missed the other disease (abscess on posterior vaginal wall). By the grace of examination

during the morning round, we could avoid time and economical hazard for the patient. Doctors should examine the patient properly and give more time to make a diagnosis. **NO NEED TO HURRY!!!**


**Case study 5:**

Case Scenario	Analysis the case
<p><b>Patient is complaining of Palpitation</b>, general weakness. Patient is in reproductive age.</p> <p><b>Scenario:</b> Patient was admitted to a public Medical college and hospital and was treated as a cardiac patient (supraventricular tachycardia) in medicine ward. Doctor advised to do USG of whole abdomen which revealed, 28 weeks of pregnant with cephalic presentation.</p>	<p>Patient being of reproductive age, it is a must for the doctors to take the menstrual history (absence of menstruation for seven month).</p> <p>If they took proper history, physician might think about the pregnancy and she could examine the patient thoroughly including per abdominal examination. The probable diagnosis was possible even before doing the USG.</p> <p><b>So from this case lesson learning is:</b> for the diagnosis of disease physician must take history thoroughly and examine the patient properly.</p>

**Case study 6:**

Scenario	
 <p>My question is</p> <p><b>Are we Teaching the future doctor's right?</b></p>	<p>During a morning ward round with junior doctors, medical officer and internes, one Interne doctor was requested to find out &amp; count the FHR.</p> <p>Sadly, the intern doctor put her stethoscope on the patient's abdomen in the wrong place. More, unfortunately she continued and acted as if she had found FHR &amp; tried to count. Upon enquiring for the reason behind this acting, It came out most of them do not know how to examine the patient to find the FHR</p> <p>Some even do not know the importance of counting FHR as well as of follow-up.</p> <p>Among twelve doctors only one knew how to and where to get and count the fetal heartbeat.</p> <p><b>Proper assessment is important for proper diagnosis as well as to treat the patient properly. This also gives assurance to the patient that she and her baby are in good hands and good condition.</b></p>

## Case 7: Analysis and discussion of case-7

Case Scenario	
<p>Patient Complaining of : P/v bleeding for 6 months, on &amp; off in nature. Scenario: Patient is 45 years of old. Doctor advised USG of lower abdomen and prescribed antibiotics. USG report was not so informative. After few days she again came to the doctor with the same complaints. This time after taking thorough history &amp; examination (per speculum &amp; bimanual P/V), the patient was suspected as a case of CA cervix. The findings are- P/S - endophytic growth on cervix, bleeding present. P/V -endophytic growth on cervix, Uterus-10 weeks of size, fixed, hard in consistency, tender, fornixes are free. Advised for cervical biopsy. Histopathology report confirmed Invasive squamous cell carcinoma.</p>	

If the 2nd doctor did not take proper history (Along with P/V bleeding she also gave history of **post coital bleeding**) and did not examine the patient properly (P/S and P/V examination) might have missed diagnosing the disease earlier. If diagnosis is dallied, so is treatment. And could have resulted in losing the patient earlier. **So from this case learning point is: Do not hurry, take time and give attention to history taking and examination of the patient for proper diagnosis and treatment.**

All these cases emphasize that medical history and physical examinations are extremely important for a correct diagnosis. **To improve the diagnostic reasoning skills, medical students and doctors should be trained in methods for understanding the correct diagnosis from the case history and examination.**

**Methods (Systems) for diagnosis of the Obstetrical and Gynecological diseases:** For proper diagnosis of the disease doctor have to take medical history properly.

**Medical history:** Doctor should significant attributes of a symptom, including location and radiation, intensity, quality, temporal sequence (onset, duration, and frequency), alleviating factors, aggravating factors, setting, associated symptoms, functional impairment [4].

**For the obstetrical and gynecological diseases menstrual and obstetrical history** doctor should be taken in details, fail to do so can result in missing important information.

**Physical Examination:** A systematic examination generally starts at the head and finishes at the extremities. Physical examinations usually depend on focus on the patient's chief complaint. The main organ systems have been investigated by four methods of physical examination (inspection, palpation, percussion, and auscultation).

Doctor should know their purposes and should decide where and when to use them. Along with per-abdominal examination need to do: Per speculum, bimanual per vaginal examination and sometimes need bimanual per rectal examination.

**Documentation:** All the findings history and examination must be documented properly.

Good records improve the function of clinics and service providers. Client's documents are a legal report of what happened to the client while in the providers care. If anything goes wrong and leads to a court case, the documents will be examined. If care was given but not documented, then in the eye of law, it is not considered as being done (**Not documented = not done**) [5].

Through history taking and medical examinations doctor can do the probable diagnosis and doctor can think what type of investigation needed for the particular patient and make a plan for proper management. The best reason for conducting a thorough physical exam is to confirm the patient history, to reduce the number of diagnostic tests, to reduce the list of potential diagnoses, reach an accurate diagnosis faster and start treatment also faster [6].

**In this article, we are trying to find out some problems in the area of history taking & physical examination in context of doctors. And some shocking and sad facts came out in a heuristic observation:** Multiple organizations over the period of 3-4 years [Out of professional courtesy, the org. details are not disclosed] Similar scenario reported by multiple (~10) observers comprising of chief consultant, consultants, obstetric managers etc. observe that 60-70 % of new doctors (interns and medical officers) although have adequate theoretical knowledge, severely lack in practical implementation and efficient execution (In bar)



■ Weak practical execution  
■ Proper and balanced knowledge of theory and practical execution

These unfortunate scenarios were unfortunately observed shockingly frequently e.g. during

- Interviewing new doctors for recruiting
- In a medical case where detailed investigation team was formed to follow-up a patient death.
- Routine ward round etc.

It is quite evident that our new generation of doctors do not take history and patient examination as seriously as they should.

To dig through the problem, discussions with new fresh doctors were carried out

Why they are not serious?

Why they do not touch the patient?

Why they do not take the medical history thoroughly?

**And we found some core reason behind the above questions. Which is given below:**

- **Knowledge deficiency:**

Many freshly graduate doctors and medical students have knowledge deficiency in history taking and patient examination. Some reported that this knowledge gap is carried from their student life. Often the teaching is only theoretical and not practical.

- **Gap in guidance of students,** interns and junior doctors.

A consequential number of students do not know how to correlate between theoretical knowledge and practical experience.

- Relation gap between teachers and students.
- Doctors are often in too much hurry for a diagnosis (not given enough time to the patient)
- Lack of appropriate environment.
- Logistic support is needed for examinations.
- Sometime privacy of the patients are not maintained in some places.
- The unfortunate turnout of a number of physicians preferring investigation over physical examination just for mere financial

gain.

**To overcome these kind of problems need some viable solutions:**

- Providing service to clients requires a continuous supply of all the required products at service delivery points.
- Need sufficient teaching staff to teach the future doctors and clinician to give service to the patient.
- Improve the relationship between doctors and patients.
- Need more staff to support the learning procedure of the students.
- Teach them properly so they can easily understand and become really interested to work with patient
- Give the students more time to practice their knowledge.
- Ward final of the students should be taken more seriously, need improved evaluation system.
- Inspire them about medical science.
- Arrange training, refresher training and workshop for the doctors.
- Privacy of the patient should always be maintained.

### Conclusion

Proper assessment of client (medical history and physical examinations) by the physicians should be done for the diagnosis of obstetrical and gynecological diseases. After that clinician can think, what type of investigation is needed for that particular patient? Once doctor diagnose the case properly, doctor can treat the patient accurately to reduce the maternal and neonatal mortality rate. And also doctor should make proper documentation for future need both medically and administratively.

Good health is a matter of teamwork, which certainly needs the patient and the clinician working together and maintaining good communication.

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