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SECOND EDITION







COMMON MISTAKES IN CLINICAL MEDICINE

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JAYPEE

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CHAPTER 2

Diagnosis

GENERAL ERRORS

Reaching at a Diagnosis

Diagnosis precedes treatment. Treating without a diagnosis is simply beating at the bush, playing with life. Diagnosis is done with the help of history taking, general physical examination, examinations of different systems and investigations. In an individual case, anyone part may be more significant than the others to reach at the diagnosis. Out of all the most important is the history taking (The Art of History Taking book by this author may be referred). However, in some cases even detail investigation may not reveal the diagnosis. There are several situations where the patient dies without a clear-cut diagnosis, necessitating a pathological autopsy to understand the disease process and advancement of knowledge. Unfortunately, this has not been possible in India. After collecting all the information from different aspects of case evaluation, highlight all the major points from each part and basing on them come to a conclusion. It is better if evaluation is done after each part of the case evaluation, i.e. history, general examination, systemic examination and investigation. This increases the power of judgment and limits the investigations; hence reducing the total cost of therapy. In a particular case one is not expected to get all

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the symptoms and signs of the disease. For diagnosis, the positives (what are there) is more important than the negatives (what are not there). However, it is the negatives, which brings the possibility of other differential diagnosis. Similarly, certain positive things may not be possible to explain in terms of the given diagnosis, which makes one think the possibility of alternate diagnosis or some other co-existing conditions. For example, in a case of typhoid fever we expect continued fever, headache, constipation (1st week), relative bradycardia, hepatosplenomegaly (2nd week), a positive Widal test and so on. Absence of some of them does not exclude the possibility of typhoid fever; of course fever has to be there. Significance of a particular symptom or sign differs. For example, if a patient has got retrosternal chest pain lasting for several minutes even if it is not radiating to other sites, not associated with sweating or dyspnea, does not exclude the possibility of myocardial infarction. Here maximum emphasis goes to the location of chest pain. Similarly if a patient becomes unconscious after some days of fever, more emphasis goes to unconsciousness than to any other complaints because there are very few conditions where a patient with fever will lose consciousness. As I mentioned negative things help to think of alternative diagnosis. For example, a patient with swelling of the body and raised jugular venous pressure if denies of dyspnea, it could be a case of pericardial disease rather than congestive cardiac failure.

The mistakes committed by the juniors are related to searching for all the points described in the books and giving undue importance to minor point. By that they give an unacceptable diagnosis. The significance of each complaint and sign can be known by practical working not by reading books. The other mistake is ignoring the negative points altogether, which is not to be done because it gives scope to think of alternative diagnosis.

Going through the Treatment Papers at the Beginning

The institutes where the medical students are trained are the tertiary care hospitals, but the places where majority of them are

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going to work will be primary or secondary care hospitals. The cases who come to medical colleges have already received some form of treatment outside, may be by senior physicians. When the young doctors will go outside the medical college, they have to take independent decisions without help from anybody. So, from the beginning they should try to develop the ability to come to a decision independently. One of the ways to do this is not to see the treatment papers of the patients from the beginning. Once they see them their own thinking and judgment power will be blunted. They are likely to be misguided. So, they should see the patient independently, form their own opinion and later on they can verify from the previous treatment papers. I want to emphasize that treatment papers are valuable documents and they have their own importance (discussed elsewhere).

Taking History and Examining the Patient Repeatedly

History is the most important part of diagnosis. Omission of certain points in the history can lead to a confusing clinical situation and unnecessary investigations. Almost all physicians have realized this in their lifetime. So, in an apparently complex clinical situation examine the patient repeatedly and take history repeatedly as if examining a new case. I shall quote some statements from certain leading authors:

- *"No one can expect to go through his career and to be right all the time, but most error arises from inadequate taking of history and inadequate physical examination—particularly the inadequate history"(Bickerstaff, 6th edition, 1996;page 8).*
- *"As with every aspect of diagnosis in medicine, the key to success is a clear and carefully recorded history" (Hutchison 20th edition; 1995; page 141).*

  Let me discuss some examples from my experience:

- A case presented with hematemesis. But she vomited blood only once. There was no melena. The amount of blood loss she showed was quite less. This raised doubt about hematemesis. So hemoptysis was considered. But examination and X-ray chest

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did not reveal anything. As both hematemesis and hemoptysis were doubted, we decided to evaluate the case from the beginning. It was revealed that she had a convulsion following which she brought out a small amount of blood from her mouth, which she concluded as hematemesis. She had not complained of convulsion at all. It was found that she had a tongue bite. Inadequate history was the problem here. These was another mistake in this case- by rule examination of the gastrointestinal (GI) system starts with examination of the oral cavity; this was not done here. Had this been done the tongue bite would have not been missed?

- A case developed several episodes of transient loss of consciousness and each time he had been admitted to intensive cardiac care unit (ICCU) and has been observed for a few days and investigated thoroughly including Holter monitoring; but nothing significant was found. Evaluation of the history revealed that each time he became unconscious while urinating in erect posture. So, it was diagnosed to be a case of micturition syncope and simple instructions for passing urine helped him.

One Track Mind

There are several fields of medical care like gynecology, cardiology, neurology, pediatrics, surgery and many more. This has been done to serve the people better. Certainly it has been responsible for better treatment of the patients, but at times it has caused several problems also. I have heard from various classes of people that in view of these divisions often the people do not think himself as an individual rather a combination of organs. I remember a case of 56 years of age presented with dyspnea, wheezing, swelling of face and body. She consulted a cardiologist; he did relevant investigations, did not find any cause and advised to consult a nephrologist. The nephrologist did another set of tests and said that it is not a nephrological problem and advised to consult a gastroenterologist. The gastroenterologist did another set of tests and told that it is not a GI problem. Getting disgusted with this she took admission

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to a government hospital where the resident took a good history and decided that she was suffering from angioneurotic edema and treated her without further testing and she survived. This is just an example how people have not been helped by subdivision of health care system. So, wherever one works one should always think that he has basic trainings of MBBS. Utilizing his basic knowledge he can solve a lot of problems. Similarly he should examine any patient in the similar manner. He should not feel from the beginning that it will be a gynecology case because he is working in gynecology. That it will be a cardiology case because he is working in cardiology and so on. This is one-track mind. Once some body develops one-track mind, he is likely to miss many simple problems or if detected it will be too late. I shall quote a few more examples:

- A young female patient presented with colicky abdominal pain and swelling of abdomen. Somebody referred her to attend surgery OPD thinking it to be a case of intestinal obstruction. But truly she was suffering from labor pain.
- A patient of RHD (rheumatic heart disease) treated in the cardiology ward as infective endocarditis, was actually suffering from lung abscess.
- A patient with RHD with PUO treated in cardiology ward, as infective endocarditis did not improve; it was a case of AIDS.
- A case of SLE with lung involvement being treated by a chest physician as pulmonary tuberculosis.
- A case of absence seizure being treated by a psychiatrist as a psychiatric illness.
- A case of diabetes mellitus (DM) being treated by an endocrinologist for DM while she was also suffering from abdominal tuberculosis.
- A case of infective endocarditis (in HOCM) being treated as tuberculosis by a chest physician.
- A case of PUO being treated as tuberculosis while it was a case of scleroderma.
- A few cases of anaphylaxis being missed by gynecologists and waiting for the physician to detect and treat.

  There are many such examples.

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Inability to use Common Sense

To understand any disease a sound scientific knowledge is necessary, but always this may not be enough. At times we should use common sense. There are many situations where science does not help but the common sense helps. The common sense is nothing but the knowledge that we use for day-to-day work. Let us see some situations where common sense has helped.

CASE 1

In a mess, two boys were staying in the same room. They used to keep milk in the same pot and were drinking from the same pot. One day the first boy came at about 4 PM, drank his portion of milk and went to play. After sometime, the second boy came and while going to drink the milk found that there was a house lizard in it. He did not drink. In the evening, when the first boy returned from play this was revealed to him by the second boy. Since then the first boy started vomiting repeatedly so that he was admitted to a nursing home. There he was given drugs to control vomiting and intravenous fluids. After several hours when the vomiting was not controlled, they consulted me. I took the detail history and decided that his vomiting is not due to any toxic effect, because had it been due to some toxic effects it would not have waited till listening of the news of lizard in the milk. In fact whether the lizard was there in the milk by the time the first boy drank the milk is not certain. So, here the vomiting was very likely of psychogenic in nature. To tackle this problem promethazine and diazepam injections (one from each) were given which completely solved his problem. Here what helped is not the scientific knowledge, but application of common sense of daily life.

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CASE 2

A girl of 23 years of age doing postgraduation in pediatrics was brought unconscious to the emergency ward at about 10 am. She was staying in a single room in the ladies' hostel. Some of her friends told that they had seen her well in the morning. In view of sudden loss of consciousness in a young girl, a case of poisoning was suspected. One of her friend told that she had attempted suicide twice. So, it was more or less clear that it was a case of poisoning. But what she had taken? She being a medical student, many senior and junior doctors came to see her. Some of the senior doctors gave the opinion that it was a case of organophosphorus poisoning and accordingly treatment was started. I was of the opinion that if a doctor will commit suicide she will either take barbiturate or antidiabetic drugs, which will cause peaceful death. I instructed to give IV glucose and plan for hemodialysis and in the mean time asked her friend to go to her room and search her room and outside of her room so that some thrown away remnants of the thing she had taken might be lying. She found that there were empty strips of twenty tablets of Daonil (Glibenclamide) and empty strips of ten tablets of propranolol hidden under her mattress. Now the diagnosis was established and she was saved. What here helped is the application of common sense.

CASE 3

A boy of 18 years was brought at about 10 am with the complaint that he is neither able to speak nor able to open his eyes since he got up from sleep. A junior doctor opined that it was a case of malingering, because he was able to listen, understand,

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but was not speaking or opening his eyes. However, it was seen that he was not able to swallow his saliva also. Someone gave the opinion that it was a case of polyneuritis cranialis. But I was of the opinion that it was a case of neurotoxic snakebite. This I suspected by analyzing the circumstances in which it had happened. It was summer season. He was sleeping outside on the verandah. There was a heavy shower of rain in the night. So it is natural to have had a deep sleep in summer night if there is rain (as the temperature comes down) and in such a state of sleep there can be snakebite without the knowledge of the victim. In fact one incidence I remembered which happened in my village years ago; a child of 9 years, sleeping outside in summer season was found dead in the morning and the snake was hanging from his back. This incidence made me think the possibility of snakebite in this case and treatment was given accordingly. The boy survived. In a similar situation another case was treated as polyneuritis cranialis, was not given ASV and he died after a few hours. Here what happened is application of knowledge from daily life in patient management without waiting for scientific evidence. Later on there have been publications about the possibility of neurotoxic snakebite in cases of early morning cranial nerve palsies.

CASE 4

A 55 years old person was brought with abdominal pain, vomiting, constipation and abdominal distension. As the most probable diagnosis was intestinal obstruction, he was taken to a surgeon. Obviously he advised for immediate surgery, but the person was not ready to spend the amount needed for surgery and he was also afraid of the surgical intervention. So he consulted me. I took the detail history and it was revealed that he had not passed stool for last seven days,

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but his abdominal pain was for two days only. Ordinarily constipation succeeds abdominal pain in intestinal obstruction, but here it has proceeded by several days. So, it is logical to think that because of marked constipation of several days, there has been fecal impaction and presenting like intestinal obstruction. Manual removal of the impacted stool relieved the intestinal obstruction.

These are just a few examples. There will be ample scope to apply common sense in many cases.

Assemble all the Points to Come to a Conclusion

There are several points described to differentiate two conditions and students often face problems in utilizing these points. For examples so many points are described to differentiate jugular venous pulse from carotid pulse, hemoptysis from hematemesis, enlarged spleen from enlarged kidney and so on. There are so many points because in one or the other patient some of these points might be missing. That means each point has got limitation. For example, in JVP we are supposed to see two waves (c wave is not visible) but in patients with atrial fibrillation 'a' wave will be missing and only 'v' wave will be seen. Similarly we say that carotid pulse is better felt and venous pulse is better seen, but in patients with severe pulmonary arterial hypertension with tricuspid regurgitation v-wave may also be palpable. That is why it is told to assemble all the points present and come to a conclusion. I can explain this with a simple example. Suppose I cut the nose of a person and show you, it will not be possible to recognize whose nose is this? Similarly if I cut the lips of an individual and show, it will not be possible to identify whose lips are those? Similarly if I cut the eyes of a person and show, it will not be possible to recognize whose eyes are they? And so on. But if the lips, the nose, the eyes and other parts of the face are assembled, a clear-cut face will emerge and it can be

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identified easily. Hence, assembling all the points will help to come to a conclusion.

Conversion Reactions

At times students jump to give a conclusion of conversion reaction without trying to exclude an organic condition. But by principle one should exclude organic causes before thinking it to be a case of conversion reaction. An example will explain it better. A young boy came with history of few episodes of vomiting. He had no other complaints. He never looked ill and there were no other positive physical findings. He did not vomit at all in the 24 hours stay in the hospital. So, the possibility of malingering was thought of. However, ophthalmoscopy showed papilledema. This raised the doubt of intracranial space occupying lesion. In fact CT scan showed a cerebellar tumor. There are many symptoms and signs with which patients may present as malingering. There are differentiating points in almost each, which can be found out from other books. When in doubt the patient may be kept under observation for some days and examined several times. If there will be different findings at different times and at times they may be contradictory to each other or some of the findings cannot be explained scientifically it could be a case of conversion reaction. In addition to these the action and attitude of the patient particularly in presence of relatives and the treating doctor may also help. It has to be remembered that significant weight loss and rise of temperature recorded by thermometer always go in favor of organic disease.

ERRORS IN ANALYSIS OF SYMPTOMS

The Chief Complaints

Students often get confused what to write in the chief complaints. It is told that the chief complaints are to be written in the words of the patient. But always it will not be possible to do that. In fact in most of the situations it is not possible. Our patients complain

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in their local language, not in scientific words. At times it becomes difficult to understand their complaints even in the local language. So students should first try to understand the complaint clearly and then convert it into a scientifically meaningful word without altering the meaning. Of course the chief complaints are to be written in chronological order. One has to remember that the patient tells that complaint which he feels important, but there might be more important complaints, which are to be tactfully extracted from the patient. Such complaints should also be included in chief complaints also (for details one can look for the book "The art of history taking"). For example, a lady came and showed her fingers and told that "This has happened" without speaking any words for the complaint. It was seen that the finger tips were blackened. In fact, she had developed dry gangrene due to vasculitis. Here the chief complaints should be blackening of the finger tips instead of "This has happened". If gangrene is written it will be totally a scientific word not the word of the patient. There are many such instances.

Uncommon Manifestations of Common Diseases/Common Manifestations of Uncommon Diseases

It is told that uncommon manifestations of common diseases are more common than common manifestations of uncommon diseases. If one follows this principle most of the time he will be right, though he may be wrong at times. The importance of this statement is one should always think of a common condition first. So, one should know details of common ailments seen in a locality/country. Knowing details of an uncommon disease can be considered as useless knowledge. I shall give few examples to emphasize the statement:

- A young female presented with low-grade fever and arthralgia of several weeks duration. Most of the investigations were normal except hilar lymphadenopathy. Possibilities were tuberculosis (arthralgia is uncommon), lymphoma and sarcoidosis. CT scan of the thorax established that it was tuberculosis. Tuberculosis

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being a common disease it is better to think it first even if arthralgia was an uncommon manifestation. If the patient would not have been able to do CT scan she should have received therapeutic trial for tuberculosis.

- A patient presented with features of nephrotic syndrome with huge splenomegaly with history of fever off and on. Nephrotic syndrome was established by investigation. But cause of huge splenomegaly could not be correlated with the nephrotic syndrome. Immunological test for malaria was found positive, so a diagnosis of tropical splenomegaly was made. Treatment with antimalarials not only led to regression the splenomegaly but also the nephrotic syndrome was cured too. Malaria causing nephrotic syndrome is uncommon, but in view of being a common condition one should think of it first (though investigations should be done to exclude other conditions).

There are many more examples.

It is also told that if an uncommon diagnosis has to be made it has to be suspected in a referral hospital. Cases being treated at several centers reach a tertiary care hospital, so it might not be a common condition. Here in addition to thinking of a common condition uncommon conditions should also be thought of. I shall also give a few examples in favor of this:

- A case presented with excessive bleeding from the gum following extraction of tooth. In view of commonness it was thought that it could be case with a bleeding/clotting disorder. But investigations revealed none. The case was referred to one of the apex institute of the country where it was detected to be a case of AV malformation of the lower jaw. Here bleeding gum is a common problem but the disease is uncommon.
- A male patient was being admitted to hospital several times with hemoptysis, at times massive. This continued for six years. There was no other symptom and there was no deterioration of health. Evaluation of this case in a larger center brought out that he was having a pulmonary AV malformation. Here hemoptysis was a common condition but the cause detected was uncommon.

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COMMON MISTAKES IN CLINICAL MEDICINE

Wise people learn from their own mistakes as well as other's mistakes. A fool repeats the mistakes. No doctor has completed his career without committing mistakes. When mistakes are committed in the learning stage, then there are teachers who can rectify them. After passing out, there will be none to rectify their mistakes. Though books write correct things, but mistakes do occur for several reasons. This is a unique book in the sense that many mistakes committed by students or doctors have been compiled, analyzed, and steps that can be taken to prevent them have been discussed. This is a very useful book for undergraduates, postgraduates, and interns as well as passed-out doctors. Anybody who will read with sincerity will be immensely benefited.



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