

Procedure of Practical Comprehensive
Internal Medicine
(40 years' Practice)

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A few places added to the original HP paper

KURIMOTO,Hidehiko,M.D.Ph.D

Abstract

I would like to introduce the format of the concept of patient whole clinical care in internal medicine, which is not a single specialty disease ; the Comprehensive Problem-Based Internal Medicine. The actual case for illustrative material should be limited to a brief patient profile, as this is not a case study.

She is a 27-year-old girl who weighed 18 kg and was transported. Mentally retarded by nature. She was overweight in her childhood with a good appetite, and her abdomen has been bloated with gas for 20 years. She has been examined at various institutions. But, no known cause. She was bullied because of gas. Decreased eating. Significant weight loss. Weight was gained with tube feeding. Unspecified eating disorder (denial of fear of obesity and body image, and difficulty of eating due to fullness) was the psychiatric diagnosis. Gastric torsion at 1 year ago. Farting every day. BMI 9.9. Blood pressure 86 mmHg (diastolic unmeasurable). Intestinal murmur increased. Blood and urine analysis revealed no abnormalities.

The patient was saved. The following is an explanation of the basic diagnostic thinking showing the basic terminology, and is touching on the social relationships among the departments in the practice.

【 1 】 Comprehensive Problem-Based System (Rules of Medical Record Description)

【 2 】 Case Analysis (Diagnostic Process)

【 3 】 Sociology among Physicians

(Three principles of Organizational Formation)

To begin with, let's take a look at X-Ray of the case
(See abdominal plain X-Ray).



【 1 】 Comprehensive Problem-Based system (Hereafter abbreviated as CPBS)

The CPBS is a form of thinking about clinical care of the patient as a whole. It is practiced by way of writing the main body of the medical record. However, there are no examples of actual practice format that show how to think about the entire clinical practice from the beginning to the end.

The rules for writing the medical record require "observe, consider, judge, conclude, plan and treat" in this manner. It is necessarily educational, and good form encourages good practice and bad form encourages bad practice.

The CPBS is similar to Descartes' "Divide the difficulty" analysis and synthesis (Fig.1).

Extract the disease from the chaos of patient. That is a "problem". When we solve the problems individually and restore them to their original state, the chaos becomes structured. That is the "problem list". Because it is a division in the dimension of disease, it can be restored to the patient exactly as it is. Advanced subdivision, which cannot be restored to the patient as it is, is not the domain of clinical practice.

The first task is to collect materials (patient history, past documents, physical and laboratory findings). The materials cannot be gathered all at once in an emergency.

The medical events in the data are sorted by disease. This is not a simple counting of abnormal events.

Create groups by disease (Fig.2). Each one is a separate disease. The events thus summarized is the explanation that this is such a disease.

Each of them is given a name that describes the true nature of the disease. It is not

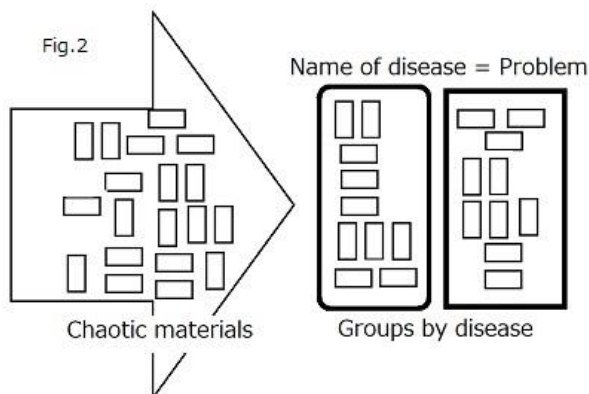
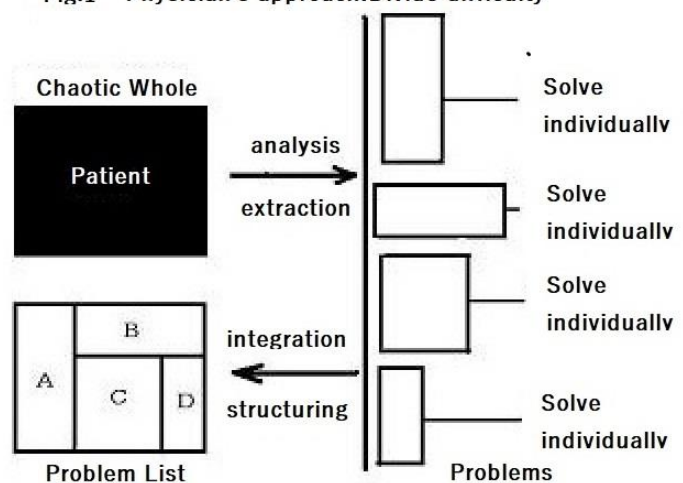


Fig.1 Physician's approach: Divide difficulty



necessarily a classical name of disease. If we name it "anemia", anemia is the essence, but we don't know any more than that right now. Pleural effusion, paranoia, lung mass... . We can only diagnose so much at this point. We don't know if "lung mass" is an inflammatory mass or a neoplasm, and the diagnosis is stuck at "lung mass. We don't know more than that.

The problem list is made according to the rules.

The format must have definitions of terms and rules of writing. The CPBS further requires a

"distinction between fact and speculation" and "clarification of arguments and lines of thought".

{ The Concept of Problem }

1. The patient's disease and name at that point in time. Since this term "problem" is not a commonly used problem or issue, the different notation "katakana"(one of the Japanese written letter) for "problem" is used.
2. A disease that can only be called as such at that point in time.
3. The name of diagnosis and the disease at that point in time.
4. The name of a set of disease and each disease is in the set.
5. Problem list is a list of diseases of the patient at that point in time.

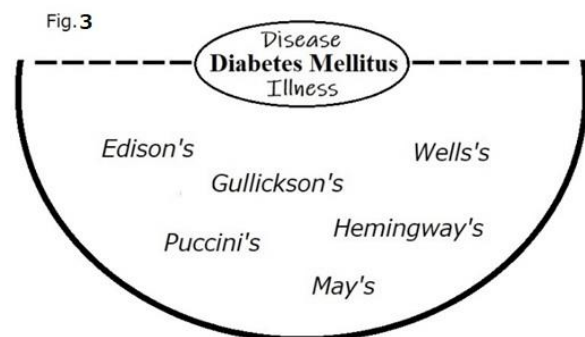
Only recently a problem has finally been considered a disease (it took 40years). Different categories, such as social conditions, should not be equated with a disease.

(a) Problem is the name of a set

Consider a concept. A concept is an idea that is the essence of things by extracting common properties from individual objects that have unique properties.

In other words, the concept is a set and individual each is an element of the set. The term "schizophrenia" includes both "conceptual" and "individual" schizophrenia. "What kind of disease?" is a concept and "Munch was like this" is an individual situation. The two are different categories. No clear terminology cannot be found in the West or East that distinguishes this two. If they differ, they are different terms.

The concept set was defined as "disease" and the patient's situation as "illness"(Fig.3) The researcher's target is "disease as a concept" and the clinician's target is "patient's disease". The characteristic of science is "universality and reproducibility," while the characteristic of clinical practice is "historicity and temporality."



Each person is an individual historical entity, and each person is a one-time event since the Big Bang. The clinician's practice is a historical act based on science that cannot be turned back.

the CPBS thoughts:

1. A person's life belongs to the person
2. Clinical practice is a historical act that cannot be reversed
3. For patients, the doctor dealing with them represents all doctors

(b) Problem is the name of the diagnosed disease at the time

What is that disease? What is the name of the diagnosis now? The answer to this question is "problem".

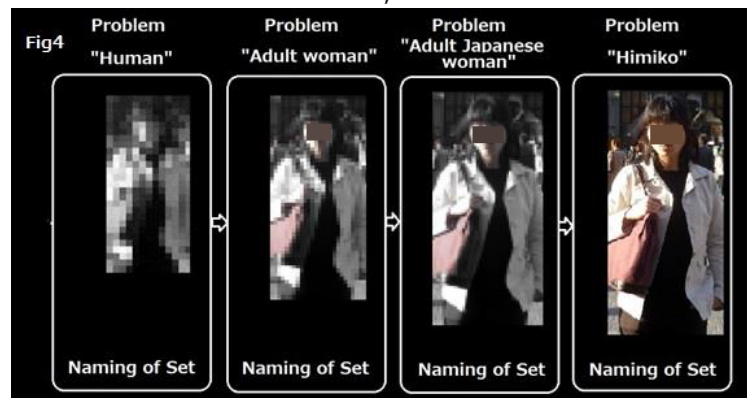
There is something here now. What is "This"? What is the diagnostic name? This is "Human." A problem is the name of a set. This is one of a set of concepts called "Human." More information, what's the diagnosis? "Adult woman". So far, so certain. More in detail, the diagnosis is "Adult Japanese woman".

"This" belongs to the set "Human", to its subset "Adult woman", and further to its subset "Adult Japanese woman" (Fig.4)

The diagnostic name "This" was narrowed. The number of elements was reduced from 70 billion to several million. Finally, the set "Himiko" (said to be the first king, a female, of the ancient kingdom of Japan). The number of elements in the set

"Himiko" is very small. If this is all, there is only one disease with this name.

Diagnosis is the process of starting from a nameless name, going through a general and broad name, and then seeking a limited and specific name. There must be evidence and logic to advance the name. Diagnosis is not guesswork or speculation. It is a name that is a fact.



【 2 】 Case Analysis

Analyze and interpret and organize the material events to determine the framework of thought. Determine the initial problem with correct insight. The initial problem is the framework of thinking at the starting point(Fig.5).

The name is not an item of abnormal symptoms or findings. The name is the true nature of the disease and the diagnosis. The reasoning here is "inductive" and corresponds to the big-picture thinking in Go

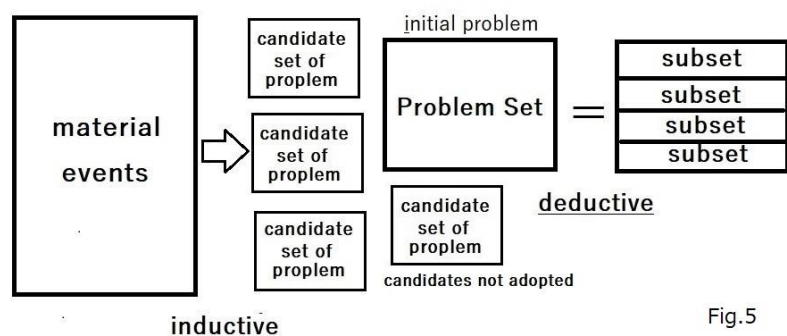


Fig.5

and Shogi, where there is a big difference between professionals and amateurs. A broad perspective and correct analytical experience are required.

In this case, there are three diseases recognized. Each of the sorted groups is one disease and not merely a deposition of symptoms and findings.

Initial Problem List:

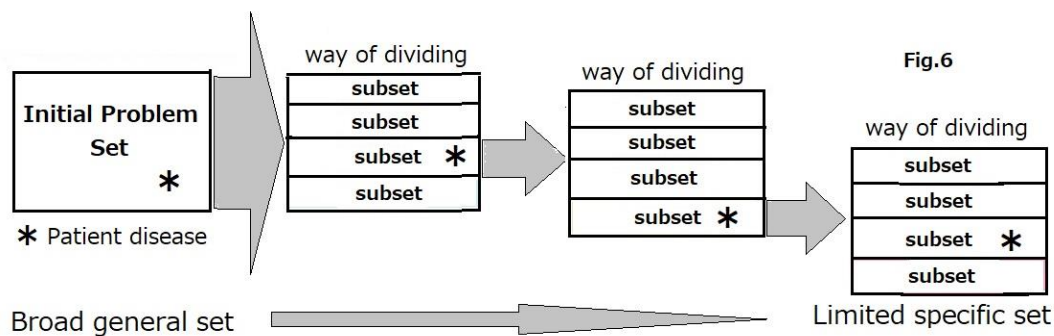
#1 Congenital Mental Retardation [registered date omitted]

#2 Intestinal Gas Retention Disease

#3 Hyponutrition Syndrome

After the initial problem, "deductive" reasoning traces subsets(Fig.6). This subset, then a subset of it, and so on.

The way the subset is divided is important. For example, a subset of human can be divided into male and female if it is sex, or Japan and the U.S. if it is nationality, and so on.



The subsets are mutually exclusive and there are no gaps between them. In this way, the diagnosis is narrowed down by subsets one after another. The patient's disease is always in one of the following subsets, and the diagnosis is made as far as it will go. Choose the division that best suits the purpose.

There are two important points throughout. The first is the extraction of initial problems from chaotic information events, and the second is the selection of subsets from these problems.

Let's show the actual diagnostic process of Intestinal Gas Retention Disease. The gas was divided by its origin, trying to figure out how it accumulated.

#2 Intestinal Gas Retention Disease

Subset; Sorted by origin of gas

[Intestinal gas production | External gas ingress]

Evidence in the past; Since childhood

Evidence in the present time; Uniform dilatation of all gastrointestinal tracts. Intestinal wall smooth and equal. Normal bowel motility. Normal intestinal absorption. No intestinal fecal mass. History of gastric gas dilatation torsion.

There are a number of events from the past to the present that can rule out intestinal gas production.

For example, read the X-Ray. The intestinal wall is uniformly thin and smooth. There is no edema, congestion, or hyperemia in the intestinal wall. The lumen is uniformly and evenly filled with gas. No exudate. So, no inflammation.

Physical examination revealed a bowel murmur. There was gas. Muscle layers function well. Weight gain on tube feeding. Digestion and absorption are normal, and the mucosa is functioning normally. There are no fecal masses, which are a source of energy for bacteria. In

other words, the gastrointestinal tract itself is normal, and the only problem is gas retention. Gastric torsion suggests that the stomach was full of gas. Intestinal gas does not cause this. It is easy to deny gas generation inside the intestine. Therefore, it is an external invasion.

What we are looking for. Positive and negative events of intestinal production and external invasion. If you don't construct an idea, you don't even know what you are looking for. If you don't understand the medical significance of events, you won't see anything.

#2 Intestinal Gas Retention Disease → Intestinal External Gas Ingress Retention Disease

Subset; Divided by route of gas entry.

[Oral | Transanal]

Evidence; For 20 years since infancy

There is no way it is transanal. Trace the subset to make sure step by step.

#3 Intestinal Gas Retention Disease → Intestinal External Gas Ingress Retention Disease

→ Intestinal Oral Gas Retention Disease

Subset; Divided by mode of entry

[Natural | Artificial]

Evidence; For 20 years since infancy. It cannot be man-made.

Therefore, this is Aerophagia. This diagnosis is unassailable. If the events are correctly analyzed, correctly interpreted, correctly scrutinized, and correctly constructed, no other diagnostic conclusion is possible.

#3 Hyponutrition Syndrome is of the marasmus type. Now life-threatening with this problem.

Problem List at the end of the conference:

#1 Congenital Mental retardation

#2 Intestinal Gas Retention Disease → Aerophagia Sysndrome

#3 Hyponutrition Sysndrome → Marasmus Hyponutrition (#2)

This is the conclusion that we reached as far as we could go by continuing to analyze and interpret the material events.

Then, deaeration and decreased abdominal fullness. Weight gain with tube feeding. Goal is about #2 to find and deal with any oral malformations that must be present, and #3 oral intake.

Swallowing air was observed and deformity was present. Each time she swallows spit, she is swallowing air. A new #4 was added.

Problem List:

#1 Congenital Mental retardation

#2 Intestinal Gas Retention → Aerophagia Syndrome(#4)

#3 Hyponutrition Syndrome → Marasmus Hyponutrition (#2)

#4 Intraoral Malformation Disease

{ Description of Each Problem }

Problems have their own past, present and future. The description of each problem is the same as understanding of the patient's unique disease. It is not a description of a conceptual disease. It is a description of "this patient's disease (illness)".

This 27 years old girl's specific aerophagia in the concept set "Aerophagia Syndrome".

#2 Intestinal Gas Retention → Aerophagia Syndrome(#4)

Past: Childhood: small fat with large appetite. Abdominal distention.

Elementary school: Abdominal distention by gas retention. (omitted below).

Present: Swallowing air every time she swallows due to oral deformity. Normal digestive, absorptive and motility function of digestive tract. (omitted below).

If you cannot describe each problem separately, you do not understand the patient's illnesses. For example, if you do not know whether the anorexia is caused by leukemia or depression, you do not understand the patient. If you do understand, you will describe it in the problem that caused it.

#3 Marasmus Hyponutrition

Placed on a gastric tube feeding and gaining weight steadily.

#4 Intraoral Malformation Disease

Unsuccessful in all various procedures, including orthotic placement. There is no way to stop the air swallow.

#2. Aerophagia Syndrome

Asymptomatic with decreased abdominal fullness due to deaeration.

However, the patient is "anorexic". When asked to eat, she refused with a grim look on her face. When the internist tried to get her to eat with her, she only took one bite and refused to eat more.

Mother is a school nurse with strong assumptions and distrusts medical care. She refuses medication and gastrostomy. That may be unavoidable considering how she has been for more than 20 years.

Probable List at this point:

#1 Congenital Mental retardation

#2 Intestinal Gas Retention syndrome → Aerophagia Syndrome(#4)

#3 Hyponutrition Syndrome → Marasmus Hyponutrition (#2) → [Cured]

#4 Intraoral Malformation Disease

#5 Eating Refusal Disorder (#2)

{ Problem List Rules }

1. List of patient's diseases(the others not allowed)
2. Number # is in order of occurrence (not in order of importance)
3. Date [] is the date of registration (guessed date of occurrence is not acceptable)

According to these rules, the Problem List becomes a registry of diseases. The structure and history of the diseases are shown obvious at a glance. The physician's perception of how the disease originated and how it is today.

To summarize this case:

#1 is the original. Coexisting #4 caused #2. #4 remains as it is and #2 continues, which caused #3 for a time. #3 was cured. And #5 was newly disclosed. Had #2 been absent, there were no #5.

A disease becomes an object of clinical care only when a physician recognizes it. Clinical care must continue beyond the facilities (GPs, clinics and hospitals). This requires a shared understanding of the diseases, which is made possible by the problem list.

Additional remarks are that if the problem list were under other rules, such as the order of importance from time to time, the list would change from time to time and would not be used as a registry. The level of importance could change from even department to department. Problem lists are not temporary memorandum notes. Ongoing clinical care is impossible without historical awareness.

Psychiatry was requested for as a subsidiary department for #5 disorder. This is now a major problem and the main department has been taken over by psychiatry, and the patient now goes to the general practitioner and the psychiatry of the hospital.

【 3 】 Sociology among Doctors

This patient also involved internal medicine and psychiatry. Nowadays, multiple departments are frequently involved.

{ Classification of Doctors }

By status, classification goes into Employed doctor and Independent doctor.

Specialty classification corresponds to the classification of medical department.

Specialty (medical department) Classification	
Function	Psychiatry, Somatology
Subject	Internal Medicine, Pediatrics, Geriatrics, Neonatology, Obstetrics and Gynecology
Anatomical Organ	Ophthalmology, Dermatology, Otolaryngology, Urology, Cardiology, Pulmonary, Gastroenterology, Nephrology, Neurology, Hematology

Disease Mechanism	Immunology, Allergy, Metabolism, Endocrinology, Infectious Diseases
(Omitted hereafter)	

Medical department classification is confusing. The classification places geriatrics, dermatology and infectious diseases in parallel, but the skin of the elderly can be both infected and neoplastic, and infections can occur anywhere in the body, whether in children or in anyone else. The classification is ambiguous, but it has its own historical inevitability. However, endless subdivisions and simple enumerations must get stuck that do not consider the harmony of the whole.

From a completely different perspective, if we look at "How physicians work with and relate to patients," we can see a different picture from that of the specialty classification. Physician's specialty is an attribute of the physician, and it is another matter how physician was engaged with patient.

{ Classification of Physicians }: How physicians work for patients

Family doctor | Doctor in charge of a single disease | SHUJII

SHU-JI-I: This Japanese term means Head-Deal with-Doctor (perhaps partly similar to attending physician)

Working principle: What is the disease of "this patient"?

1. Involved with patient as a whole.
2. Responsible for patient as a whole.
3. Continuously involved with patient.

The work is not limited to and has nothing to do with whether there is any disease of the department's or doctor's specialty.

The CPBS can be paraphrased as a form of clinical practice based on this principle in the first place.

1. Clarify the overall structure of patient (totality)
2. Seek continuity in clinical care (continuity)
3. Correct medical concepts and terminology (science)
4. Clarify the scope of responsibilities as physician (responsibility)

This was not created on paper from an idea in head, but was gradually formed nearly for 10 years during actual medical practice.

{ Work of Main Attending Physician and Subsidiary Physician }

Main Attending Physician: (in charge of the "patient", general manager of medical care, strategic operation)

1. Creation and management of problem list
2. Direct work for major problems

3. Treatment of general basic issues (nutrition, sleep, excretion, etc.)

Subsidiary Physician: (responsibility for "problem", technical skills)

1. Diagnosis and treatment of single "problem" or issue and actual work

Clinical care is a highly complex activity that involves multiple professional groups with different dimensions simultaneously. The higher the level of complexity, the more essential a leader is. The main attending physician is the leader.

It is necessary to establish a system of responsibility for clinical care. That system is an organization. Organization clarifies the works and responsibilities of the main and subsidiary departments.

In the treatment of the Emperor's heart disease, the main attending physician and the surgeon even belonged to different facilities. A project team was organized here, and the relationship between the two was that of project leader and master of the required tasks.

However, the main department must function properly as the main department and the subsidiary must function properly as the subsidiary, otherwise proper clinical care cannot be provided. The medical level, or level of understanding, must also be at the same level to be able to trust and work together. This is a tough challenge that one immediately encounters if one takes responsibility for the "patient".

{ Three Principles of Organizational Formation }

1. Common goal

2. Willingness to cooperate

3 .Communication (information sharing)

It is a rudimentary knowledge in general business. The essential requirement for communication in clinical practice is shared recognition of the patient's illnesses. Without this, common goal and a desire to cooperate are empty ideas. This is a current severe issue for the physician community in clinical practice. However, this severity seems hardly recognized in the practice that does not treat patient as a whole.

Examples of problem lists from the handwritten era:

#1 Diabetes Mellitus [1992.4.01].

#2 Nephrotic syndrome [1995.5.01] → Membranous Nephropathy [1995.5.09]

→ [Cured] (#3) [1995.8.01]

#a occult blood-positive stool [1995.5.09] → #3

#3 Descending Colon Carcinoma [1995.5.18] → [Cured] (resection) [1995.5.30]

#4 Fever [1995.5.22] → Acute Pyelonephritis (E. coli) [1995.5.24] → [Cured] [1995.5.28]

The registration date shows the medical process of what the attending physician thought

and did. The problem list is a communication that transcends time and place. The patient's condition and the doctor's treatment at that time can be conveyed to the future 1000 years. Today, single-specialty practice, as well as technology, has developed remarkably. However, the SHUJII(main attending physician)function has not reached a level commensurate with today's high level of single-specialty care.

They are serious issues that physicians are able to serve as SHUJII physicians and the system for that purpose is established. The Comprehensive Problem-Based System is the true form, which ought to be, that society demands of medical practice in this age of technological revolution. Countries have yet to get hold of this format.

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