
THE TRUE ROLE OF STETHOSCOPE - CLINICAL PARADIGM

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Abstract: Technologies have "taken over" medical practice and through them the diagnostic process has become faster, more accurate, early and secure, and treatment is effective and encouraging. The positive results are indisputable, but at the same time, the old prophecy was doomed to oblivion. As a consequence, less clinical thinking and less skill in a non - standard environment (field conditions).

The article presents the real role of a medical stethoscope in medical practice. A clinical case of asymptomatic spontaneous pneumothorax in interstitial pneumonia due to a complication of rupture of the vein, diagnosed with a medical stethoscope only, has been considered.

The analysis of the physical findings is important. A key point in the analysis is the mismatch between the "expected" change in the clinical and physical picture and the "reported" physical finding, which is the evolution of the pulmonary parenchymal syndrome - instead of pure vesicular breathing, to the syndrome - air in the pleural cavity .

Theoretically, a clinical paradigm of clinical thinking, containing the components, has been developed and practically applied to the clinical case: a description of the specificities of each symptom, two aspects of a working diagnosis - what and what is not; a logical connection between the symptoms, an analysis of small deviations and nuances - a pathway to accurate diagnosis and associative thinking.

Through the stethoscope in combination with medical knowledge and clinical associative thinking, human life can be saved.

The current trend is to replace the stethoscope by automated versions. As a traditional method it will not disappear altogether because it is the cheapest and does not require electricity, which makes it a good backup method in developed regions and a logical first choice in some developing regions. The routine use of modern medical equipment allows the examination of medical problems in depth, but not in large scale in association with other symptoms as a process, and the discovery of the causes of the problem. The solution is in the possibility of old physical methods, in combination with associative clinical thinking.

The real role of the medical stethoscope returns to the classics of medical science and healing as it is known in its historical nature - such as soul, vocation, and dedication. The medical stethoscope gives the physician the freedom to be a doctor - to himself, anywhere in the world, under all circumstances and under harsh conditions.

Keywords: pneumonia, pneumothorax, paradigm, stethoscope, physical examination

INTRODUCTION

In the twenty-first century, there were three interrelated revolutions - a digital revolution, an information revolution, and a revolution of concepts. This binding of writing, printing, electricity, microprocessor technology (computers), the Internet (information supermarket) causes profound qualitative changes in all aspects of human life. In the field of medicine, the expressions of these "revolutions" are the diagnostic technologies such as: ultrasound, computer tomography, nuclear magnetic resonance, various surgical techniques, radiotherapy, telemedicine and others.

Technologies have "taken over" medical practice and through them the diagnostic process has become faster, more accurate, early and secure, and treatment is effective and encouraging. The positive results are indisputable, but at the same time, the old prophecy was doomed to oblivion. As a consequence, less clinical thinking and less skill in a non - standard environment (field conditions).

The purpose of this article is, by presenting a clinical case from outpatient practice, to focus on the exceptional but forgotten role of physical examination and clinical thinking

1. CLINICAL CASE OF MEDICAL PRACTICE

Patient 35 years old, male, asthenic habitus, diagnosed with Pneumonia interstitialis dextra. History: subfebrile temperature, cough, scarce expectoration. First ambulatory examination by a physician internist, physical finding in the right chest half: at examination - retardation of the chest half in breathing, increased voice fremitus, dark percutaneous tone, weak breathing, without wheezing. Rheography of the lung "Pneumonia dextra". Therapy: antibiotics, expatriates and vitamins. After four days, a review by the same doctor. Subjective and objective condition: no complaints, good general condition, afebrile. Physical evidence in the right chest half: in view -

retardation of the chest half in breathing, diminished voice fremitus, hypersonic percutaneous tone and lack of breathing on a wide area. Control Lung Path "Pneumothorax to the Right" (Figure 1).

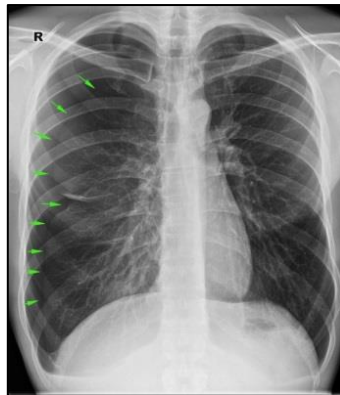


Figure 1 Pneumothorax in the right chest half

2. DISCUSSION

A key point in the clinical picture analysis was the mismatch between the "expected" change in the clinical picture, in the direction of improvement and the finding of a new physical finding, against the background of missing subjective complaints and a good general condition of the patient without respiratory failure. In particular, an improvement in the auscultatory pulmonary find should be expected, to pure vesicular respiration. Instead, auscultantly read weakened to absent breathing, to level 5-6 between the intervals. Pneumothorax was presumed to be confirmed by lung radiography

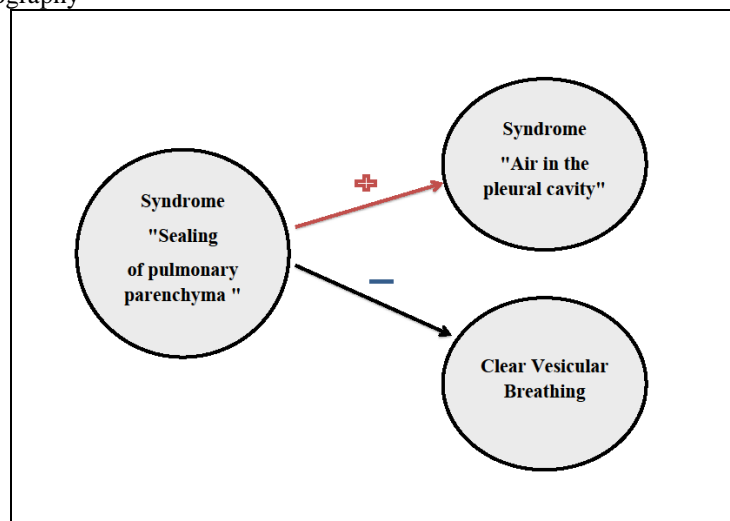


Figure 2 Inconsistency between the "expected" physical change and the "recorded" physical finding

The patient was hospitalized in emergency surgery, where torakocentesis was performed.

It has been assumed that this is a secondary spontaneous pneumothorax, such as a complication - rupture of the veins, acute pulmonary disease Pneumonia dextra. Common condition but poorly diagnosed because it is asymptomatic.

In medical science, the classic clinical picture of spontaneous pneumothorax is a dramatic one. Includes: sudden chest pain, dyspnoea in association with decreased vital capacity, reduced partial pressure of oxygen in the blood stream due to decreased ventilation-perfusion ratio, intubation-induced shunt, and alveolar hypoventilation.

In the present case, the absence of a clinical manifestation was attributed to the presence of a partial pneumothorax occupying about 10% to 30% of the pleural cavity, as well as missing underlying diseases - pulmonary and cardiac, which would worsen pulmonary ventilation.

3. ESTABLISHING OWN PARADIGM FOR CLINICAL APPROACH

This clinical case describes an asymptomatic leakage pneumothorax that was only diagnosed with a medical stethoscope in ambulatory conditions. It was the analysis of the physical find. By creating an own paradigm of clinical thinking, a diagnostic error has been avoided by further complications.

The structure of the clinical paradigm involves the combination and mutual impact of: the theoretical knowledge of the physician, his / her personal experience, the level of scientific knowledge on the medical issue.

Own paradigm = Theoretical knowledge + Personal experience + Level of scientific and practical knowledge

The intellectual capabilities of the physician's personality are important for its elaboration. The components of the paradigm are as follows:

- Description of the specifics of each symptom;
- Responding to two questions of the diagnostic process: what is available and what - is not (to the closest possible diagnosis);
- Can the symptoms be unified in one whole through a logical connection and coherence in a whole (syndrome, illness) ?;
- Analyzing small deviations of symptoms and their or other nuances - bridge to accurate diagnosis;
- Thoughts through associations;

To create an own paradigm of clinical approach, it is necessary to develop clinical thinking through associations - quickly and efficiently reaching the goal. The association arises from a different and existing but altered sign. The association is a guideline, a link to another syndrome. It arises from a difference or sign and is a point of direction and connection to another symptom (Figure 2).

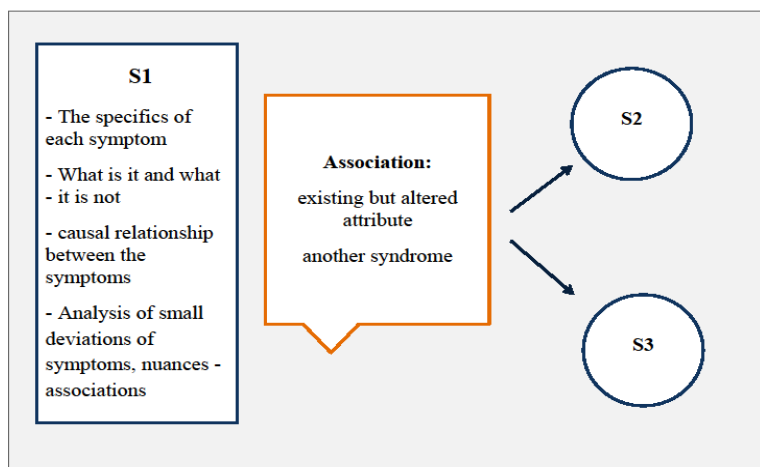


Figure 2 Model of an associative approach to clinical thinking (S1 - symptom1, S2 - symptom 2,S3 - symptom 3).

The application of the model of associative approach to clinical thinking and its own paradigm is presented in Table 1.

№	Components of an own paradigm for a clinical approach	Apply the rules in the clinical case considered
1	A description of the specifics of each symptom	Pulmonary Pulmonary Syndrome Syndrome - yes;
2	Two aspects of working diagnosis - what is available and what - is not (to the closest possible diagnosis)	Expected improvement on a review: 1. Clear vesicular breathing - no; 2. "Air in the pleural cavity" syndrome - yes;

3	Comprehensive form of symptoms to form a logical relationship and consistency	A combination of hypersonic percussion tone with weak voice void and lack of breathing
4	Analysis of small deviations and nuances - a path to the exact diagnosis	Missing breathing , weak voice void (voice fremitus - no)
5	Thinking through associations	Changing Physical Symptoms? ... New diagnosis

Table 1 Applying an own paradigm for a clinical approach

4. THE RELIABLE ROLE OF THE STETHOSCOPE

Today, the role of the stethoscope is controversial - from rejection by the medics and preference for more advanced research to full adherence as a front-line method of medical practice. In a 2012 study, it is claimed that the stethoscope, compared to other medical equipment, has the greatest positive impact on perceived reliability in practice [1].

It is believed that the stethoscope retains its value for lung and bowel auscultation, but not in cardiology where echocardiography is routinely used in secondary and tertiary care [2].

The current trend is to replace the stethoscope by automated versions. As a traditional method, it will not disappear altogether, because it is the cheapest and does not require electricity, which makes it a good backup method in the developed regions and a logical first choice in some developing regions [3].

CONSEQUENTS

Through the stethoscope in combination with medical knowledge and clinical associative thinking, human life can be saved

The narrow specialization and routine use of medical equipment allows the medical problem to be examined in depth and undoubtedly an analysis of the given clinical picture but does not address the problem more in association with other symptoms in "movement" as a process, and thus the discovery of the causes . This is only possible using the old physical methods in combination with associative clinical thinking.

CONCLUSION

The real role of the medical stethoscope returns to the classics of medical science and healing as it is known in its historical nature - such as soul, vocation, and dedication. It gives the doctor the freedom to be a doctor - to himself, anywhere in the world, under all circumstances and conditions.

It is necessary to know that the development of one's own paradigm as a principle of a clinical approach and the application of this principle to a specific clinical case can not replace the capabilities of high technology in medical practice but it is a foundation that operates anywhere at any time without material resources , flawlessly.

Therefore, making clinical paradigms through clinical thinking is not a matter of conservatism, but a living approach.

LITERATURE

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