

**Medicine modern times.
(Clinical medicine) 1640-1918.**

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«MODERN TIME»

1640 – 1918 гг.

**TIME OF APPROVAL AND
DEVELOPMENT CAPITALISM**

GENERAL FEATURES OF THE DEVELOPMENT OF MEDICINE IN WESTERN EUROPE

1. Prosperity "zenith" of capitalism;
2. The rapid growth of the industry;
3. The widespread use of steam and electricity;
4. The requirement of time mastering the natural wealth and the forces of nature (natural science and medicine order)

France was the
center of the
materialism and
atheist
development



**... Nature is materialistic,
eternal, unique and
indestructible, endlessly and
obey their objective laws**

The French materialists

✓ -Anri Leroy - defended the materialist core of the Harvey teachings;

✓ -Julien La Mettrie - announced a program of studying life processes by experiments

"Man-Machine"

-Per Cabanis - proposed a number of measures to improve hospital business and medical education

"Everything in the present
state of medicine
foreshadows its approach
to the big revolution"

Pierre Cabanis 1757-1808.

The greatest discoveries in the natural sciences:

1. Theory cellular structure of living organisms (M. Shleyden 1838; T. Shvann, 1839).
2. The Law of energy conservation (Julius Robert Mayer, 1841; James Prescott Joule 1843; Helmholtz Hermann Ludwig Ferdinand von, 1848).
3. Evolutionary theory (Charles Darwin, 1859)

«The first of these was the proof of the transformation of energy ..., the second - opening by M. Schleiden and T. Shvannon organic cells as one unit of reproduction and differentiation from which arise and grow all organisms ... The third great discovery - the theory of evolution, which is a systematic form was first developed and proved by Darwin ... »

F.Engels

**Clinical Medicine with high inertia
mastered the achievements of
biomedical sciences.**

**There was a significant gap between
the forward thinking mindset of
scientists and practitioners.**

At the beginning of the XVIII century in European clinics were not apply diagnostic tools and laboratory examination methods.

The basis of diagnosis used to:

A survey the patient (anamnesis);

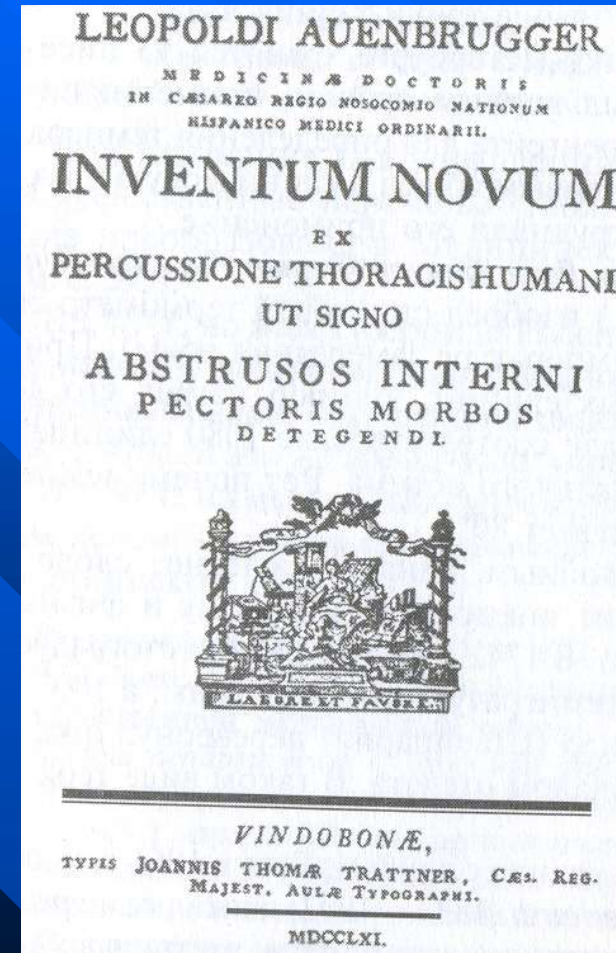
Examination of the patient and his excretions;

Feeling palm body temperature;

Counting pulse

Leopold Auenbrugger

(1722-1809)



- "The new discovery, which allows on the basis of percussion of the chest man, as a sign, to discover hidden in the depths of breast disease"

Leopold Auenbrugger
(1722-1809)

«I suggest ... I have found a new way to detect breast disease. It consists of chest percussion person who, owing to the changed sound tones gives an idea of its internal diseases ... »

**«Based on my experience, I maintain:
sign in question, it is extremely
important not only for recognition,
but also for the treatment of
diseases; Moreover, he deserves
first place after the study of pulse
and respiration »**

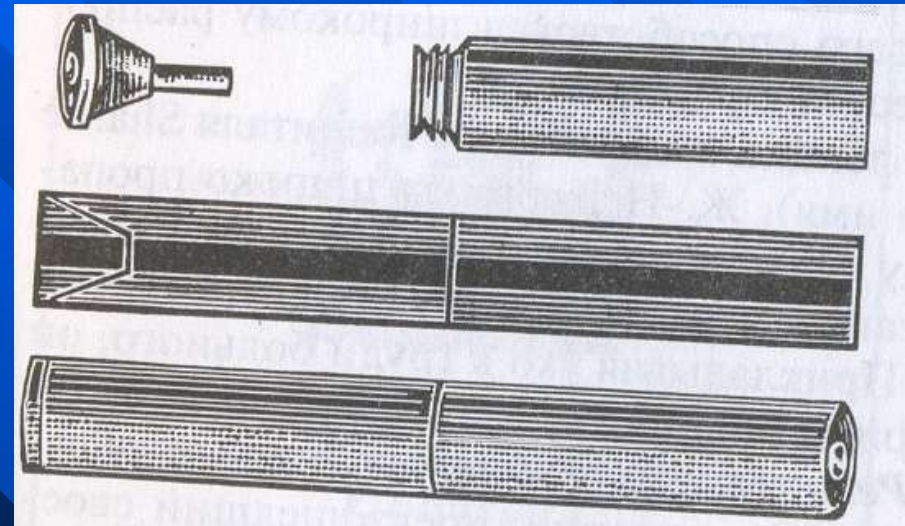
The teacher of Russian military hospital surgery Ya.A.Sapolovich applied this method in practice (defined exudate in the thorax and produced medical pleural puncture).

In Europe, the percussion method was abandoned. (L.Auenbrugger was recognized crazy, spent the last years of his life in a mental hospital, where he died in 1809).

Jean Nicolas Corvisart de Mare has revived percussion method

- He has tested this method about 20 years;
- In 1808 he published a translation of writings L.Auenbruggera;
- In 1818, he published article about percussion;
- He has suggested of percussion by method edge of the palm;
- He has diagnosed aneurysm of the heart by method of percussion ;
- He has promoted method of percussion and auscultation of the chest directly to the lectures in the amphitheater of the hospital Sharite.

Rene Theophile Hyacinthe
Laennec
(1782-1826)



- «Age and sex of the patient, - wrote Laennec - did not allow me to use ... direct auscultation of the ear, leaning against the region of the heart ... I asked for a few sheets of paper, folded them into the cylinder, put one end to the heart and put his ear to the other»

"... I was equally surprised and pleased when I heard heartbeat are clear and distinct, what had never heard of them by direct application to the ear region of the heart"

The merits of Rene Laennec

- He suggested method of auscultation;
- He invented the stethoscope;
- And gave a definition of pathological anatomy of tuberculosis, determined its specificity and infectivity. He suggested recreation, high-calorie diet, the sea air, for its prevention
- Described auscultatory symptoms of heart diseases;
- The clinical cirrhosis and portal pathomorphology

■ "About auscultation and recognition of the lungs and heart diseases, based on a new method of investigation"

René Laennec, 1819

Using the methods of percussion and auscultation в России

- M.Ya.Mudrov (Moscow);
- P.A.Charukovsky (Moscow);
- F.Uden (St. Petersburg);
- G.I.Sokolsky in 1835 published a paper «About the study of diseases by use hearing and stethoscope»

The development of diagnostic methods

- In 1709 he was created a mercury thermometer Fahrenheit (huge)
- Later created a mercury thermometer Anders Celsius, which is used till now.

The range of diagnostic methods

- Percussion;
- Auscultation;
- Thermometry

Clinical method with difficulty making himself way:

- "... You can not to teach the treatment otherwise than as visiting to patients

Professor of the University of Padua
Giovanni Battista Montana.

- "... The name of clinical medicine which oversees patients at their bed"

Rector of the University of Leiden German Burhaave

Creation of clinical direction in Russia

- **1692** - Peter I sent to Padua first Russian doctor "Apothecary order" Pyotr Vasilievich Postnikov;
- **1702** - invited to the Russian Nikolay Lambertovich Bidloo ("near-doctor" Peter I);
- **1707** - creation of the first hospital school at the first land hospital across the river Yauza. N.Bidloo.
- **1753** - the reform of medical education (P.Kondoidi) and an introduction to the program of clinical disciplines (obstetrics, women's and children's diseases, physiology);
- **1755** - opening at the initiative of the Moscow Lomonosov University (philosophical, legal, medical faculty)

Creation of clinical direction in Russia

- **The first Russian professor at Moscow University Simon Gerasimov Zybelin;**
- **The first clinical ward for 10 patients (1797-Efrem Mukhin Osipovich);**
- **Creation of teaching about the disease from the standpoint of the unity of the body and the environment (a professor of pathology and therapy Justin Evdokimovich Dyadkovsky)**

Creation of clinical direction in Russia

- By the beginning of the nineteenth century in Russia opened two medical faculties at universities (the University of Moscow, St. Petersburg Medical-Surgical Academy).
- By the 60 th year opened medical faculties in universities (Tartu-Dorpat, Vilna, Kazan, Kharkov, Kiev)

Famous representatives of Clinical Medicine:



**Matthew Y. Mudrov
(1772-1831)**

- Clinical principle "treat the patient and not the disease";
- The principle of "better protected than cure";
- Writing history at the bedside "more expensive richest library";
- First in Russia applied the methods of palpation, percussion, auscultation;
- and made contributed to the Military Health;
- He explained the principle of «nervism» in internal medicine
- Created clinical school

Famous representatives of Clinical Medicine:



Sergey Petrovich Botkin
(1832-1889)

- He described the clinic of infectious hepatitis (Botkin's disease);
- Engaged in problems of rheumatism, kidney disease, heart and vascular collapse and others.
- He organized the use of laboratories in the clinic;
- Created direction of Experimental Therapeutics and Clinical Pharmacology;
- He introduced the concept of social medicine;
- He published "The course of internal medicine", "Clinical Lectures"

«Deep his mind, not enticed by his closest success, look for the key to the great riddle: what is a sick man, and how to help him - in the lab, in animal experiments.

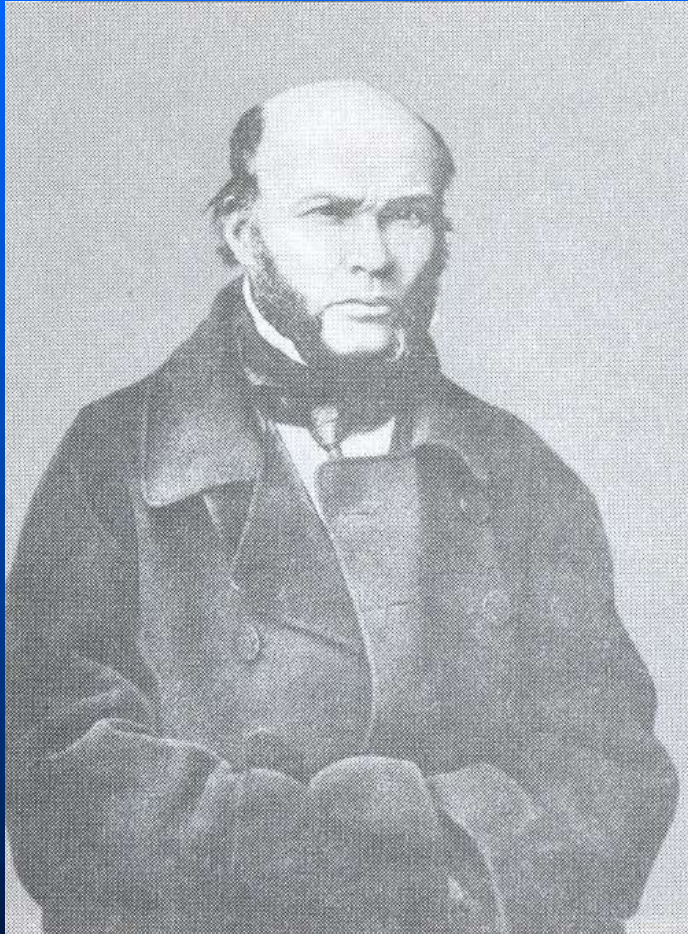
... The high score of the experiment clinician is, in my opinion, no less glory by Sergei Petrovich than its clinical, known throughout the Russian activities
”

Acad. I.P. Pavlov

**Famous representatives of Clinical
Medicine ('the golden age of the Moscow
University'):**

- **Ivan Mikhailovich Sechenov;**
- **Nikolay Vasilevich Sklifosovsky;**
- **Sergei Sergeevich Korsakov;**
- **Nil Fedorovich Filatov;**
- **Fyodor Fedorovich Erismann;**
- **Gregory Antonovich Zakhar'in
and others.**

The crown of the national surgery



**Nikolay Ivanovich Pirogov
(1810-1881)**

- The surgeon, anatomist, topographic, military surgery, founder ofesthesiology, organizer and other health care.
- In 1832, at age 22 defended his doctoral dissertation;
- In 1841 organized the Department of Hospital Surgery by the St. Petersburg Medical-Surgical Academy
- Has developed a method "ice anatomy";
- He used ether anesthesia in the hostilities;
- He introduced medical triage;
- Using the female care for the wounded ("Sisters of Charity")

**THANK YOU FOR YOUR
ATTENTION!**

