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## Teaching History of Medicine at Russian Medical Schools: Past, Present, and Future

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Teaching history of medicine at Russian medical schools has a long tradition. It always reflected the general political situation in the country. The present program has been approved by the Ministry of Health 10 years ago. History of medicine is an obligatory subject taught at the first or second year of medical school. The course usually has 40 hours, equally split between lectures and seminars, and the program is focused on Russian medicine. Here we analyze the existing textbooks on the history of medicine and their drawbacks (ideologization, inventing of national priorities in medical discoveries, and avoiding the 20th-century medicine). To improve teaching of the history of medicine, longer courses and written exams are needed. There is also an evident need of writing a new textbook on the history of medicine.

Key words: education, medical; history of medicine; medical education, Russia, medical textbooks

### Historical Introduction

Medical history has been the part of Russian medical curriculum since the eighteenth century. From 1779, to 1795 Professor M. I. Skidian gave lectures on "history of medicine and encyclopedia of medical science" at the Moscow University. In 1825, Nikifor Lebedev taught a separate course of history of medicine to the fourth year medical students. Joint chairs of history of medicine, medical encyclopedia, and literature and legal medicine were established according to the university by-laws in 1835 (1). Separate courses on the history of medicine were introduced at the chairs of internal medicine and medical diagnostics at Russian universities in 1863. There was a lack of medical historians for decades, except for the Imperial Military Medical Academy at St. Petersburg where the chair was headed by Professor G. Scarichenko (2). Independent chairs of history and encyclopedia of medicine were created in 1884 (1).

After the October Revolution in 1917, history of medicine was excluded from the curriculum and reintroduced in the 1930-ies at Moscow and Leningrad medical schools (1,3). Since 1944, chairs and courses of the history of medicine had been organized elsewhere in the USSR. A program for the history of medicine at medical schools, which introduced seminars in addition to the lectures, was approved by the Ministry of Health in 1951. It did not change much up to the present. However, the so-called "struggle against cosmopolitanism" had resulted in the exclusion of the world history of medicine, and only Russian history of medicine was taught at the seminars. The major tasks of teaching history of medicine was to strengthen patriotic feelings in future Soviet doctors. Hence one of the most important aspects of studying history of medicine was "to reveal and to defend our national priorities" (4). For example, penicillin was claimed to be discovered not by Alexander Fleming in 1928, but by two Russian scientists, V.A. Manassein and A.G. Polotebnov, as early as 1871 (3). It also turned out that insulin was discovered not by Banting and Best in 1921 but by a Russian scientist L. Sobolev twenty years before. Vitamins were not discovered by Funk in 1912 but by N.I. Lunin in 1880. Typhoid transmission was discovered by Russian scientists 35 years before Charle Nicolas (4). When it was difficult to argue the Russian priority (e.g., in case of narcosis), the following rhetoric was used: "The discovery of narcosis became the subject of speculation and unhealthy advertisement [in the USA and Western Europe], whereas in Russia narcosis had immediately underwent serious scientific examination by collectives of famous scientists... So, which country turned to be the motherland of surgical anesthesia?" (4). It was claimed that, although Darwin's evolutionary theory, narcosis, aseptics and antiseptics, vaccination, etc., were problems of international science, it was in Russia where they got their progressive development and solution. It should be noted that this was a general tendency in the history of science in that period (for example, Yablokov, and not Edison, was the true inventor of an electric bulb, radio waves were discovered by Popov, etc.). There was a popular joke reflecting this situation: "The true motherland of elephants is Russia". Pavlov's teaching on the leading role of nervous system (the so-called nervism) was proclaimed a cornerstone of Soviet medical science and its natural and scientific basis (the philosophical basis was undoubtedly "the great

teaching of Marxism-Leninism"). At the same time, "scientists" such as T. Lysenko (who ruined Soviet genetics) or Lepeshinskaya and Boshyan (who revived the medieval concepts of creating alive matter from non-alive) were praised and propagated.

#### History of Medicine in the Modern Medical School Curriculum

There are about 50 medical schools in Russia. History of medicine is an obligatory subject, but the actual amount of teaching hours in each case is regulated by the rector. In any case, it should not be less than 36 hours. For example, for several years the Chair of History of Medicine and Culturology of the Moscow Medical Academy had 140 hours for teaching the history of medicine (when it was also taught not only to first-year students, but also to senior medical students). However, the teaching often consisted of haphazard talks of invited lecturers, did not have any program, and was subsequently considered by the rector to be a waste of precious time of medical students.

Teaching history of medicine is divided into general history of medicine and special history of medicine (1). General history of medicine is taught at the chairs or courses of history of medicine. Few medical schools have independent chairs of history of medicine. Most often it is taught at chairs of social hygiene and health care, where one or two persons are responsible for the course on the history of medicine. It is focused on studying general trends of the development of medicine and health care. Special history of medicine deals with the origin and development of different medical disciplines and is included into their courses.

General history of medicine is taught mainly during the first year of medical training, or during the second year at some schools. The existing program (approved in 1989) is aimed at studying mostly Russian history of medicine. There are normally 40 hours for studying history of medicine in the curriculum – 20 hours for lecturing and 20 hours for seminars. Only three lectures (6 hours) are usually dedicated to the world history of medicine (ancient, medieval, and modern medicine). The program is focused on seminars, where students repeat lecture materials and discuss textbook chapters on Russian medicine, study prominent Russian scientists and deliver short reports based on their research. They use a reading-book on the history of medicine, which contains transcripts of the works of Russian medical doctors (mainly of the nineteenth century) and Communist Party programs (5). There are no exams to check the knowledge on the history of medicine.

#### Training Medical Historians

Candidates for postgraduate training in the history of medicine (Ph.D. program, the so-called aspirantura) are chosen from medical students. The program lasts 3 years and normally is preceded by a year of research. The total length of specialization in the history of medicine is thus four years. It should result with a Ph.D. in history of medicine. Postgraduates study the methods of historical science, philosophy, statistics, bibliography, etc. Another prospective way of making medical historians is to encourage research on special history of medicine by doctors and postgraduates from other university chairs. However, medical students are generally reluctant to undertake low-paid vacancies in the history of medicine.

#### Russian Textbooks on History of Medicine

In 1978 Michail Kuzmin delineated the following tasks of medical historians: a) objective Marxist-Leninist illumination of the history of medicine; b) detailed study of the history of Russian medicine; and c) nurturing high moral standards in medical students (including feelings of national pride and irreconcilable struggle against bourgeois ideology) (6). He also proclaimed four basic principles of the history of medicine: a) historicism; b) Party spirit (meaning loyalty to the ruling Communist party and struggle against "bourgeois theories in medicine"), c) combination of nationalism and internationalism; and d) combination of general and special matters.

These tasks and principles were strictly followed in the textbooks on the history of medicine for students. There were three different textbooks on the subject. The first textbook on the history of medicine was published in 1961 (347 pages, circulation 25,000 copies) (7). This book is considered the classical example of plagiarism – many pages are derived from the earlier publication of P. Zabludovski without any reference for it (see ref. 3). The importance of the subject is justified in the following manner: "Knowledge of history of medicine facilitates understanding medicine of the socialist society as the qualitatively new and highest stage in the development of Russian and world medicine". Let us have a closer look at a chapter on medicine in the second half of the 19th century in relation to natural sciences. Out of total volume of 38 pages, only 8 pages are dedicated to international medicine. Claude Bernard is given less attention than Nikolai Chernyshevsky (1828-1889), Russian revolutionary writer favored by Lenin. There are 4 chapters dedicated to socialist medicine. Here are some definitions from this edition: "Freudism has become an ideology of modern fascist bourgeoisie" or "the poison of reactionary teaching on constitution penetrates bourgeois medicine via channels of eugenics and genetics set off against social hygiene". The changes in the second edition of this textbook, published in 1967 (circulation 41,000 copies), were minor: "According

to CPSU (Communist Party of the Soviet Union) Program adopted by XXII CPSU Congress the investigation of problems of world history should demonstrate the movement of humankind towards communism. This guideline should be applied to the history of medicine" (8).

The second textbook (350 pages, circulation 50,000) written by four medical historians is less coherent and rather primitive (9). The periodization of the history of medicine repeats the approved Marxist scheme for general history: medicine in the slave-owning system, medicine in the feudal system, medicine of capitalism, and socialist medicine (after 1917). The third textbook (388 pages, circulation 10,000) might be compared to the draft published by the same author in 1988 (10,11). The epigraph from Lenin is replaced by Bernard Shaw, medicine of the newest period dates from 1918 (end of World War I) instead of 1917 (the October Revolution), Michail Gorbachev is not quoted any longer. This textbook says almost nothing about medicine of the last decades.

The structure of textbooks on the history of medicine underwent significant changes during these three decades. The amount of pages dedicated to Russian medicine has gradually decreased (from half of the textbook in 1961 to one third in 1994).

In all three textbooks on the history of medicine Lenin, Marx, and Engels are the most frequently quoted authors, but their citation-index has decreased. The number of quotations of the creators of the theory of nervism (I.M. Sechenov and I.P. Pavlov) has also diminished.

#### Some Problems of the 20th Century History of Medicine

Teaching history of medicine at Russian medical schools usually does not go beyond the 19th and early 20th century because one needs half a century gap to consider events objectively (12). It is also thought that last 30-50 years do not belong to history but to the life-time of our contemporaries.

Nevertheless, social and scientific changes in the second half of the 20th century are unsurpassable. We are witnessing the so-called "information explosion" – the amount of information doubles every 10-15 years. Information technology became a key element of scientific development. There are also several important changes in natural and social sciences (12): a) the concept of civilized development of the society; the main types of civilization are European, Atlantic, Eurasian, Islamic, Russian, and Special (which incorporates features of several types of civilization); b) integration processes both in science and technology and in social development of international organizations (UN, WHO, EC, etc); c) development of new computer-based technologies; d) global integration resulting in new breakthroughs and discoveries (cybernetics, system approach, biotechnology, molecular biology and medicine, immunology, radiology, etc.); e) genetics (structure of DNA, cloning, and gene therapy); f) a concept of management and coordination of human functions based on Pavlov's theory (nervism), homeostasis, H. Selye's adaptation syndrome, etc.; g) etological and ecological studies (K. Lorenz, N. Tinbergen, etc.) which might be related to some pathogenic patterns in humans; h) development of psychoanalysis and the concept of unconsciousness (S. Freud and his followers); i) human personality as a key issue for research; bioethics instead of deontology; and j) the role of social factors in the development of most diseases of modern man, creation of state and private insurance and healthcare.

This list of general problems, processes, and events of the second half of our century is surely incomplete. They are shaping the image of modern medicine and healthcare and should be studied, investigated and taught to medical students. The concept of principal impossibility of historical studies of the 20th century medicine should be abandoned.

#### Discussion and Suggestions

Historical thinking should be used not only in the history of medicine but in all medical disciplines. Studying methodology and methods of any scientific subject needs time. History of medicine is one of the leading ideological disciplines in the system of medical science, which demands changing its methodology. It is necessary to form a new concept of general history of medicine. We are trying to consider theoretical problems of the history of medicine from a cultural standpoint, using the so-called "museum approach" (13), aimed at creating syncretistic (artistic and scientific) models for research and teaching. This might be achieved by the translation of low-level logical information into non-logical information of a higher spiritual level. It is important to make better use of medical museums for teaching history of medicine.

We suggest complementing of the existing program by teaching history of medicine at the fourth year of medical school, when students are aware of basic and clinical sciences. Students' knowledge should be used as a criterion for the teaching load instead of teaching hours (14). It is up to the teacher to establish the balance between individual studies of students and obligatory lectures and seminars. The course should have written examination and a diploma thesis. There should be 80 hours of history of medicine at the curriculum (20 hours of lectures and 20 hours of seminars in the first year and 10 hours of lectures and 30 hours of seminars in the fourth year).

Teaching history of medicine also includes learning cultural traditions. A future physician should

possess not only professional knowledge but culture awareness as well. Thus the process of teaching history of medicine is aimed at cultural education. Teaching history of medicine should be provided by joint efforts of different chairs of medical schools. Chairs and courses of the history of medicine are entitled to coordinate such activity. This would increase the importance of the history of medicine and its impact on the whole medical curriculum. There is also an urgent need to prepare a new textbook on the history of medicine, devoid of old ideological dogmas. Ideological and methodological foundations of history of medicine have to be revised, because history of medicine shapes a new social thinking in medicine.

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