

The scientific elite in the history of the nation's internal medicine clinical practice (20th century)

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The author examines the role of the scientific elite as a distinctive and important factor in the development of domestic clinical medicine. The time frame in which this factor was influential is pinpointed – the first three-quarters of the 20th century (it follows that this time frame was the same as for clinical research schools). Three basic conditions for the emergence of the clinical elite are set out (a high standard of scientific and public life, the existence of large clinical schools, the realization by the state and society as a whole of the role of scientific elites). The stages of the elite's therapeutic activities are defined, which was conditional on rotations in the leading groups. The fact that medical congresses played a crucial role in the formation of the clinical elite in the first half of the 20th century is demonstrated, and in the second half clinicians from the USSR Academy of Medical Sciences (AMS) became a decisive factor in the nation's scientific life. The therapeutic field's elite formed at the beginning of the second decade of the 20th century. It was left without V.N. Sirotinin and V.P. Obratsov, but included such prominent leaders as N.Ya. Chistovich and M.V. Yanovsky (Petrograd), V.D. Shervinsky (Moscow) and F.G. Yanovsky (Kiev). The defining characteristics of the elite's activities were its functional approach to the problems of disease and the development of instrumental and laboratory methods for functional diagnostics. The first change of leadership in the therapeutic field's elite is shown to have occurred in the second half of the 1920s, and it was not accompanied by a change in the developmental direction of internal medicine's clinic practice in the Soviet Union, as the new leaders comprised mainly of students and successors to the Russian clinicians mentioned above. They included D.D. Pletnev and M.P. Konchalovsky (Moscow), S.S. Zimnitsky (Kazan), G.F. Lang (Leningrad) and N.D. Strazhesko (Kiev). With the creation of the USSR Academy of Medical Sciences, the institutionalization of clinical elites was completed. A description is provided of the therapeutic elite's new leaders' role in the context of the growing specialization of clinical medicine (1950–1970s).

Keywords: *scientific elite, scientific schools, medical congresses, the history of internal medicine's clinic practice*

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In domestic historical and medical literature, numerous studies have sought to analyse of the role of scientific schools in the development of clinical medicine in the 20th century. Another factor influencing the development of domestic clinical medicine in the 20th century, which is closely associated with the former – the change of the scientific elite – has not been the subject of researchers' attention until now. This study is an attempt to outline approaches to the examination of this issue. Therapeutic clinical practice has been chosen as the model of analysis.

The clinical elite in the first decade of the 20th century

The time frames within which both factors fall almost coincide: analysis of the history of domestic clinical medicine shows that they both had a direct and significant influence on its development during the first three-quarters of the 20th century. Italian sociologist V. Pareto's theory (1916) that any elite is the peak of a pyramid has been generally accepted, but the medical elite had not yet formed in the domestic clinical practice of the 19th century. Needless to say, there were leaders. Those in internal medicine clinical practice were S.P. Botkin, E.E. Eichwald and V.A. Manassein in Saint Petersburg; G.A. Zakharyin, A.A. Ostroumov, K.M. Pavlinov and M.P. Cherinov in Moscow; F.F. Mering in

Kiev and N.A. Vinogradov in Kazan. Those in surgical clinical practice were N.V. Sklifosovsky (Moscow and Saint Petersburg), A.A. Bobrov and P.I. Dyakonov (Moscow), L.L. Levshin (Kazan and Moscow), and S.P. Kolomnin and N.A. Velyaminov (Saint Petersburg). The “pyramid” as such was nonexistent: there were no institutions to facilitate regular interaction between leading experts or the exchange of views on the scientific development of the field.

The high standard of the country’s clinicians’ scientific and public life included such benefits as personal contact with leading academics at medical congresses and conferences of scientific associations, the availability of scientific periodicals, the review of published monographs and textbooks, public lectures and discussions. The existence of large clinical schools and the state and society’s realization of the role of the scientific elite (without which the elite remains the peak of a purely scientific pyramid, but does not assume administrative and management functions and is unable to influence the process of integrating scientific achievements into clinical practice) – all typical of the 20th century – were the necessary and sufficient conditions for the formation of the clinical elite.

Medical congresses and the formation of the clinical elite

Medical congresses and scientific organizations played the most important role in the formation of the first clinical elite. The first specialized scientific organization was the surgical society in Moscow, which was established in 1873 and consisted of 22 surgeons, medical doctors from teaching hospitals and city hospitals. In 1881 the N.I. Pirogov Surgical Society was established in Saint Petersburg. National congresses on specialties within clinical practice were held beginning in the late 19th century. The All-Russian Congress of Psychiatrists and Neuropathologists (1887) was the first, followed by the congresses of syphilologists (1897), surgeons (1900), therapists (1909) and others. The 12th International Medical Congress was held in Moscow in 1897 under the chairmanship of N.V. Sklifosovsky. Medical periodicals emerged at the end of the 19th century.

The first five pre-war congresses of Russian therapists (1909–1913) defined the highest

ranks of the therapeutic elite. The first congress convened thanks to the initiative of members of the internal medicine section of the Pirogov Society and the organizational efforts of V.D. Shervinsky, chairman of the Moscow Therapeutic Society, after many years of negotiating with government authorities and agencies. That congress was held in Moscow in 1909 and V.N. Sirotinin was elected its chairman. Sessions were also chaired by S.S. Botkin (son of the great clinician), V.P. Obratsov and F.G. Yanovsky. Among those elected members of the council of the society and members of organization committees in Moscow and Saint Petersburg for preparation of the next congress were V.N. Sirotinin, S.S. Botkin, N.Y. Chitovich and M.V. Yanovsky (Saint Petersburg); V.D. Shervinsky and L.E. Golubinin from Moscow and V.P. Obratsov and F.G. Yanovsky from Kiev. They managed the organizational preparation of congresses, outlined the thematic scope, set the agenda of the next congress and chaired meetings. The three “Chairmen Vasily” (as they called themselves) – Vasily Parmenovich Obratsov (1851–1920), Vasily Nikolaevich Sirotinin (1855–1934) and Vasily Dmitrievich Shervinsky (1850–1941) – played a key role.

Scientific schools and the clinical elite

The role of scientific schools in forming the elite derived from their function of preserving and passing on knowledge from one generation to the next. Separate links binding them together can be identified in this “relay of growing knowledge.” “The links are represented by the creativity of particular personalities and the bonds by the interaction between them. The ‘teacher–student’ bond plays a critical role. The student who has mastered the knowledge system of his teacher and has not added anything to this system is the epigone in science. Scientific creativity demands not only assimilation of previous knowledge, but the capacity to, in some measure, go beyond or refute that knowledge. In other words, the bifunctional nature of the relay of growing knowledge gives rise to a certain contradiction between the conservative function of transferring knowledge and the heuristic function of its increment” [14].

Therefore, students who have overcome the school establishment and have broken the mould

in the development of science are evidence not of the collapse of the scientific school, but in fact of its triumph. One example is a pioneer of internal medicine clinical practice in the Soviet Union, G.F. Lang. Having broken away from the school of M.V. Yanovsky, he continued to study issues relating to peripheral hemodynamics, which were characteristic of that school, and created the study of essential hypertension. Another example is E.N. Meshalkin, one of the pioneers of cardiovascular surgery in the Soviet Union. Having left the scientific school of A.N. Bakulev in Moscow, he set up his unique school of cardiovascular surgeons in Novosibirsk with a fundamental biomedical approach to studying mechanisms of hypothermic myocardial protection, problems of operating on a dry heart under hypothermia and the compensation abilities of blood circulation with cardiac defects [16, p. 227–228].

The establishment of large scientific schools was one of the hallmarks of clinical medicine from the second half of the 19th century to the first half of the 20th century. S.P. Botkin's therapeutic school, which was the largest in Russia, lasted into the 20th century through "subsidiary schools" created at the Military Medical Academy (MMA) by his students M.V. Yanovsky (prominent therapists G.Y. Gurevich, A.I. Ignatovsky, D.O. Krylov, N.A. Kurshakov, G.F. Lang and others belonged to this school) and N.Y. Chistovich (among his students M.I. Arinkin, S.I. Zlatogorov, S.M. Ryss and N.N. Savitsky can be mentioned). The unified scientific clinical school of V.D. Shervinsky and L.E. Golubinin was formed at the Moscow University in the first decade of the 20th century. V.N. Vinogradov, M.I. Wiechert, M.P. Konchalovsky, M.I. Pevzner and E.E. Fromgold belonged to this school. At the Kiev Imperial University of Saint Vladimir, the schools of V.P. Obratsov (L.B. Bukhshtab, M.M. Gubergits, N.D. Stazhesko, B.I. Trusevich and others) and F.G. Yanovsky (V.K. Vasilenko, B.E. Votchal and V.A. Ivanov) stood out. These five largest therapeutic research schools in Russia played a decisive role in preserving the traditions of domestic therapeutic clinical practice during the establishment of the new Soviet medical practice and the formation of clinical thinking among the pioneers of internal medicine clinical practice in the Soviet Union and the Soviet therapeutic elite as a whole.

Functional direction and development of instrumental and laboratory methods for functional diagnostics as characteristics of the established therapeutic elite

The therapeutic elite in Russia therefore took shape in the second decade of the 20th century. The development of clinical medicine gave rise to, as priority fundamental tasks, further specialization with the separation of new scientific and academic disciplines and corresponding medical specialties and the development of instrumental and laboratory methods for functional diagnostics as the foundation of such branching-out of therapy and surgery, which had hitherto comprised the single tree of clinical medicine. The pride of Pre-Pirogov surgery – I.V. Buyalsky and Moscow University professors F.I. Inozemtsev and A.I. Over in the middle of the century, and zemstvo¹ doctors even at the end of the 19th century – were surgeons, therapists and obstetrician-gynaecologists at the same time. The long process of the separation of obstetrics and gynaecology, pediatry, neurology, psychiatry, otorhinolaryngology, ophthalmology, urology and dermato-venereology into independent academic and scientific disciplines and medical specialties began in the second half of the 19th century. The active formation of these and a host of other clinical disciplines occurred in the 20th century.

Clinical medicine was revolutionized during the 20th century. At the turn of the century, as before, a doctor still examined a patient, while gathering detailed medical history, using methods of examination, palpation, percussion and auscultation, and analysing not only symptoms of the disease but the patient's personality as well. The doctor did not have at his disposal X-ray diagnosis and electrocardiography techniques, an acoustic method of measuring blood pressure or digital panels displaying laboratory findings, let alone ultrasound diagnostics, computer and magnetic resonance imaging and other modern diagnostic techniques. Among therapists, the skill to identify a complex heart defect through the finest auscultation techniques, for instance, was considered a superior skill. Drug therapists had to

¹ Zemstvo was a form of local government in the Russian Empire.

do without sulfanilamides and antibiotics, insulin and other hormonal drugs, psychotropic agents and adrenergic blocking agents, thrombolytic drugs, etc. Hence physiotherapeutic techniques, general therapeutic recommendations and psychotherapy played a major role in therapy. Even a brief comparison with modern clinical practice clearly identifies two different types of medicine, one at the beginning of the century and the other supplanting it as the century progressed. Leading clinicians at the beginning of the century recognised the development of instrumental and laboratory diagnosis methods to be the overriding priority of clinical research.

The example of leading therapeutic clinics and clinical schools reveals the embodiment of this doctrine in everyday practice. M.V. Yanovsky's clinic at the Military Medical Academy developed methods for studying peripheral circulation. In particular, thanks to M.V. Yanovsky and his staff, the auscultatory method of measuring blood pressure passed systematic clinical testing. This method, which was discovered by surgeon N.S. Korotkov in 1905, was offered to clinicians and is used in modern medicine. V.P. Obratsov's clinic at the Kiev Imperial University of Saint Vladimir published the works of N.D. Strazhesko [17], M.M. Gubergrits and others, which were devoted to graphical methods of investigating the cardiovascular system, as well as the therapeutic use of strophanthin for cardiac failure. In 1910 at F.G. Yanovsky's clinic at the same university, A.F. Kakovsky developed a method for quantitative determination of elements formed in urinary sediment (Kakovsky sample). At the first congress of therapists, the faculty therapeutic clinic of the Moscow University was represented by L.E. Golubinin's paper on serodiagnosis of internal diseases. X-ray examination and X-ray imaging capabilities were also demonstrated. Using funds left by L.E. Golubinin's will, the clinic bought electroradiographic equipment, which was used by V.F. Zelenin, privatdozent² of the clinic, to perform his ground-breaking research starting from 1914. At Kazan University, N.A. Vinogradov's student A.N. Kazem-Bek provided the father of

domestic electrocardiography A.F. Samoylov with patients for his research from the faculty clinic.

It is particularly the development of instrumental and laboratory diagnostic methods and the first successes in creating an array of effective drugs (insulin therapy for diabetes mellitus, the methodical development of treatment of circulatory deficiency with cardiac glycosides, chemotherapy for infectious diseases and complications with sulfanilamides and the beginning of the use of antibiotics, etc.), along with a gradual shift from the morphological and nosological lines of clinical thinking towards functional (clinical and experimental) and syndromic approaches that distinguish the first half of the 20th century as an independent phase in the historical development of clinical medicine [18, p. 16].

Post-1917: was the change of the scientific elite the direct consequence of political upheavals?

The revolutionary events of 1917 and the change in the political system, the ruling class and the development benchmarks of the country changed the course of life in Russia. However, we do not have compelling evidence that the change of the therapeutic elite, which is of interest to us, was a consequence of these events. In early 1918 V.N. Sirotinin, N.Y. Chistovich and M.V. Yanovsky were department heads at the Military Medical Academy, V.P. Obratsov and F.G. Yanovsky headed departments at the Kiev Imperial University of Saint Vladimir and V.D. Shervinsky had his prestigious private practice in Moscow. They remained the country's most respected therapists, as evidenced by the 7th Congress of Russian Therapists held in Moscow in 1924. V.D. Shervinsky was chairman of the organizing committee and N.Y. Chistovich was elected chairman of the 8th congress and its organizing committee.

In his welcoming speech at the opening of the 7th congress V.D. Shervinsky noted, "It is nearly seven and a half years since the 6th Congress of Russian Therapists, held in December 1916 in Moscow. Beginning in 1918 members of the organizing committee of the council of the Association of Russian Therapists convened every year to discuss matters regarding the organization of the next, seventh, congress. They met every year

² Privatdozent – in pre-revolutionary Russia, a teaching post which allowed those professors who weren't in the staff of a university, to teach and deliver lectures after they submitted their dissertation.

and each year they concluded that organizing the congress was extremely challenging. They had to postpone the now-customary annual joint work and exchange of views among Russian therapists.” In his opening speech, chairman of the congress N.Y. Chistovich noted the Botkin (functional, clinical and experimental) path in the development of clinical medicine: “I fully acknowledge that in my presence you have honoured the legacy of the great therapist S.P. Botkin, the last student and successor of whose I was destined to become...” S.S. Zimnitsky addressed the functional developmental direction of clinical practice. Opening the discussion on the first topic of the program – “Modern study of inflammatory and degenerative processes in kidneys” – he noted, “Coming to the congress from far off, we wanted to hear the latest in the study of kidneys. Meanwhile, Professor D.O. Krylov drew your attention to what we have already known since 1914. He still holds the previous anatomic point of view, declaring the clinical-anatomical correlations of Volhard and Fahr to be true to this day. But is that really the case? In the study of kidneys, the old anatomical direction has outlived its usefulness and a new one is yet to be set. ...For us, clinicians, only the clinical path remains, which we must functionally develop further” [19, p. 448–452]. At the same congress, S.S. Zimnitsky presented a paper titled “Results of functional researches in the pathology of the stomach.” Signs of the change of the therapeutic elite only emerged in the mid-1920s. D.D. Pletnev was elected chairman of the 8th congress (1925), while S.S. Zimnitsky was elected chairman of the 9th congress (1926); M.P. Konchalovsky was elected chairman of the organizing committee of the 10th congress (1928). The change of leadership in Soviet therapeutic practice was complete by the second half of the 1920s. Instead of V.N. Sirotinin (who emigrated to Paris), V.P. Obratsov (who died in 1920), V.D. Shervinsky (who quit general therapy to concentrate on endocrinology problems as a researcher), M.V. Yanovsky (who died in 1927) and F.G. Yanovsky (who died in 1928), as well as S.S. Botkin and L.E. Golubinin (who had died in 1910 and 1912, respectively), in the 1930s the country’s therapists were led by D.D. Pletnev and M.P. Konchalovsky from Moscow, G.F. Lang from Leningrad and N.D. Strazhesko from Kiev, who in historical medical and therapeutic

literature are commonly referred to as the pioneers of internal medicine clinical practice in the Soviet Union.

The “big four” of Soviet therapy. On the Botkin path of the development of clinical medicine

Among the pioneers of Soviet therapeutic practice, D.D. Pletnev alone did not come directly from the above-mentioned therapeutic schools. However, he was an assistant/privatdozent at the faculty therapeutic clinic of the Moscow University for a long time. It is therefore no surprise that the first change of the elite did not lead to change in the primary direction of the development of Soviet internal medicine. Clinical practice remained on the Botkin path through clinical and experimental studies, the development of instrumental methods for functional diagnostics and the experimental search for new drugs. Each of the above-mentioned leading therapists in the country considered it necessary to emphasise in publications and speeches that they belonged to this Botkin path, which they had inherited from their mentors. This direction was reflected in the first key therapeutic journals – *Clinical Medicine* (founded in 1920 by D.D. Pletnev and co-editors) and *Therapeutic Archive* (founded in 1923 by M.P. Konchalovsky and G.F. Lang).

The leadership of the “big four” as pioneers of Soviet therapeutic clinical practice was unquestioned among the leaders themselves and other prominent therapists. And so it was until 1937, when at the instigation of “competent authorities” the most prominent leader – D.D. Pletnev – was branded a “sadistic professor” by the *Pravda* newspaper. He was subsequently subjected to repression and executed by shooting in 1941. His absence left the “triumvirate”, and prominent Leningrad therapist M.V. Chernorutsky wrote in 1940 that “the medical genealogy of the three – M.P. Konchalovsky, G.F. Lang and N.D. Strazhesko – could be traced back to their mentors, right up to S.P. Botkin.” According to Chernorutsky, M.P. Konchalovsky, G.F. Lang and N.D. Strazhesko virtually comprised the triumvirate that was at the forefront of Soviet therapeutic clinical practice and was leading Soviet therapy “in the direction outlined by the genius Russian clinician S.P. Botkin.”

**On the geography of the Soviet therapeutic elite.
Totalitarianism as a factor influencing
the formation of the elite**

In the years between the wars in the 1920–1930s, the Soviet therapeutic elite came from an expanding geography of medical research centres: the 8th (1925) through the 12th (1935) congresses of therapists were addressed and chaired by L.B. Bukhshtab from Odessa, F.O. Gausman from Minsk, N.K. Goryaev from Kazan, V.M. Kogan-Yasny from Kharkov, A.M. Levin from Baku and N.I. Leporsky and N.A. Kurshakov from Voronezh. Leading medical centres in the country – the First Moscow State University (First Moscow Medical Institute) and the Leningrad Military Medical Academy – were represented in the therapeutic elite by E.E. Fromgold, the indispensable “comrade” (i.e. the deputy) of the chairman of the Moscow Therapeutic Society (V.D. Shervinsky, M.P. Konchalovsky or D.D. Pletnev), and M.I. Arinkin, one of the most respected therapists in Leningrad (after G.F. Lang).

From the second half of the 1930s, factors of the so-called external history of science, born from the political and ideological processes occurring throughout the country (the culmination of the Stalinist repressive totalitarianism), played an increasingly greater role in the formation of the therapeutic elite. There was a noticeable rise of party cadres to leading roles in the therapeutic research community (examples are professors and Communist Party members [Bolsheviks] E.M. Gelstein and B.B. Kogan) and the particular significance of “Kremlin medicine” (examples are the rise of Professor V.N. Vinogradov to become the head of the therapeutic department of the Kremlin hospital and then Stalin’s personal doctor; the career advancement of V.K. Vasilenko, E.I. Chazov; and in surgery the positions of A.N. Bakulev, B.V. Petrovsky and N.A. Lopatkin). During those years, a key role was also played by the head of the first department of therapy of the Central Extension Course Institute (CECI) for Doctors, R.A. Luria, who was also the organiser and director of the Kazan Extension Course Institute. From 1930 he was one of the founders of the CECI for Doctors and the unified Soviet system for post-graduate medical education. Chief therapist of the Red Army M.S. Vovsi joined the elite in the years of the Second World War.

**The establishment of the USSR Academy of Medical
Sciences: completion of the institutionalization
of the therapeutic elite (1944–1945)**

As the war raged on, the establishment of the USSR Academy of Medical Sciences (AMS) began in 1944. The academy was meant to become the center for leading the postwar development of medical sciences in the country, capable of providing a comprehensive approach to solving problems, of generating scientific ideas in the medical field and of defining “growth points” in new areas. With the creation of the academy and its institutes, from the late 1940s to the beginning of the second half of the 20th century, the medical research elite obtained a basic institutional framework and an official status, and the chances of their influencing the development of medical science improved significantly. Nevertheless, to claim that the initial makeup of members of the academy corresponded to the composition of the elite of that time would be an oversimplification.

Academy members were not elected – they were appointed by the government at the recommendation of the AMS Organization Bureau, which comprised chairman G.A. Miterev (health minister of the Soviet Union), members of the USSR Academy of Sciences (AS) A.N. Abrikosov and N.N. Burdenko, director of the All-Union Institute of Experimental Medicine and AS correspondent member N.I. Grashenkov, B.D. Petrov and S.G. Suvorov from the Central Committee of the Communist Party and minister of health of the Russian Soviet Federative Socialist Republic A.F. Tretyakov. The candidate selection process was long, with a thorough bureaucratic “examination”. As a result, the list of academy members corresponded to the state of affairs in clinical medicine at that time. However, the process was not without its failings.

Moscow therapists M.P. Konchalovsky and R.A. Luria, contenders for membership in the academy, had died in 1942 and 1944, respectively. However, the widely recognized leader, chairman of the All-Union Society of Therapists G.F. Lang, failed to make the list of academy members even though he was alive. According to A.L. Myasnikov, facing

persistent demands from a group of scientists to include G.F. Lang on the list, N.I. Grashenkov responded with an “explanation” [22, c. 26]: it was categorically out of the question because G.F. Lang was German and he had a sister in Holland. (G.F. Lang became a member of the academy at the first election held the following year in 1945.) Also missing on the list was M.I. Pevzner, the father of dietology in the Soviet Union, owing to a wrangle with a minister. Colleagues probably thought the leader of therapists in Armenia and prominent historian of Armenian medicine L.A. Oganessian did not hold a position in the national arena that warranted his inclusion on the first list. However, the overall composition of the AMS reflected the situation among the medical elite when the academy was established.

The list of therapists who were AMS members, which was expanded after the elections in 1945, confirms that the therapeutic elite in the second half of the 1940s was led by G.F. Lang from Leningrad, N.D. Strazhesko from Kiev, V.N. Vinogradov and V.F. Zelenin from Moscow, and N.I. Leporsky, M.I. Arinkin and M.V. Chernorutsky from Leningrad; there was not yet the concentration of the clinical research elite in Moscow that would be typical for the second half of the 20th century. However, the time for change of the clinical elite came after just a few years, at the end of the 1940s. The above-mentioned leaders of internal medicine clinical practice belonged to the generation of the “seventies” – those born between the mid-1870s and the early 1880s. In 1948 A.N. Kryukov – who was the author of a seminal work on haematology, tropical medicine and clinical practice of acute diseases, and who belonged to the older generation of therapists – and the “young” A.L. Myasnikov, E.M. Tareev and M.S. Vovsi (all from Moscow and each about the age of 50) were elected academy members. A.I. Nesterov should also be added to that group. He was elected academy member in 1950, but had been a correspondent member of AMS since 1945. In the 1950s, the elite also included V.K. Vasilenko (correspondent member from 1946, academy member from 1957) and I.A. Kassirsky (correspondent member from 1958, academy member from 1963).

New leaders of the therapeutic elite (1950–1970). Specialization of clinical medicine

G.F. Lang died in 1948 and N.D. Strazhesko died in 1952. The latter, owing to health reasons and signs of the establishment’s imminent disfavour, quit active scientific and public work after 1947. Between 1946 and 1948 V.F. Zelenin stepped down from his position as academy member and secretary of the department of clinical medicine of the AMS and director of the academy’s Institute of Therapy. From the late 1940s, the therapeutic elite was led by V.N. Vinogradov, who “inherited” from M.P. Konchalovsky and G.F. Lang the role and the “weight” of chairman of the All-Union Society of Therapists and chief editor of *Therapeutic Archive* and, most importantly, possessing the possibilities of being the leading therapist of the Kremlin hospital; A.L. Myasnikov, academy member and secretary of the department of clinical medicine of the AMS (1948–1953) and director of the AMS Institute of Therapy; A.I. Nesterov, academy member and secretary of the AMS Presidium (1950–1953) and vice-president of the academy (1953–1957); M.S. Vovsi, vice-chairman of the All-Union Society of Therapists, chief editor of *Clinical Medicine* and chief therapist of the Soviet army; and E.M. Tareev, who did not hold such posts, but was the author of numerous outstanding scientific works. This change of leadership is confirmed by documents from the congresses of therapists: the 14th congress held in Moscow in 1956 was opened by A.L. Myasnikov and E.M. Tareev, and M.S. Vovsi and A.I. Nesterov chaired sessions. The 15th congress held in Moscow in 1962 was chaired by V.N. Vinogradov.

V.N. Vinogradov represented the clinical school of V.D. Shervinsky and L.E. Golubinin, A.L. Myasnikov was a student of G.F. Lang, A.I. Nesterov was a student of N.I. Leporsky, M.S. Vovsi was a student of D.D. Pletnev, E.M. Tareev was a student of M.P. Konchalovsky, V.K. Vasilenko was a student of N.D. Strazhesko and I.A. Kassirsky was a student of A.N. Kryukov. Without doubt, the continuity of traditions in clinical practice was preserved. However, the work of these leaders flourished in the second half of the 20th century, in the 1950–1960s. The

prime objective of clinical practice, the condition for its successful development at that time, was a narrower specialization, the establishment of many areas of clinical practice as independent scientific and academic disciplines branching off from internal medicine clinical practice and surgery. Leaders exploited their position, influence and connections to overcome formal and other institutional challenges. For instance, A.L. Myasnikov virtually turned the Institute of Therapy into an institute of cardiology. He founded the magazine *Cardiology* and was the architect and organizer of the All-Union Cardiology Society. The Institute for Rheumatic Diseases, the network of cardiorheumatology centers in multi-field hospitals and departments in polyclinics and the All-Union Society of Rheumatologists were all established at the instigation and under the leadership of A.I. Nesterov. The All-Union Center for Nephrology and Hemodialysis and the All-Union Society of Nephrologists were established under the auspices of E.M. Tareev. V.K. Vasilenko founded the All-Union Research Institute of Gastroenterology and the All-Union Society of Gastroenterologists. I.A. Kassirsky had a decisive influence on the establishment of

hemology. Unlike the next generations of leading clinicians, they all remained broad-profile therapists and were general therapy department heads.

Conclusion

The clinical research elite gradually lost its influence and significance in the last quarter of the 20th century due to an lack of collegiality in decision-making and the concentration of power in the hands of individual leaders of clinical disciplines. Among such autocratic leaders were E.I. Chazov in cardiology, E.M. Tareev in nephrology, A.I. Vorobyev in hematology, A.V. Snezhnevsky in psychiatry, B.V. Petrovsky in surgery and N.A. Lopatkin in urology. The notion of the “scientific therapeutic elite” as applied to medicine is meaningless in the 21st century.

When investigating the domestic clinical elite in the first half of the 20th century, primary sources are the materials of scientific organizations and national congresses of clinicians, and when investigating the middle and second half of the 20th century, archive and literature materials describing the composition and work of the USSR Academy of Medical Sciences are primary sources.

REFERENCES

1. Pletnev D.D. *Russkie terapevticheskie shkoly. [Russian therapeutic schools]*. Moscow – Petrograd, 1923. 104 p. (in Russian)
2. Borodulin F.R. *Shkola S.P. Botkina [Botkin School]*. Doctoral dissertation. Moscow, 1941. (in Russian)
3. Konyus E.M. *A.A. Kisel i ego shkola [A.A. Kisel and his school]*. Moscow, 1949. 346 p. (in Russian)
4. Lisitsyn Y.P. *A.J. Kozhevnikov i moskovskaya shkola nevropatologov [Kozhevnikov and the Moscow school of neurologists]*. Moscow, 1961. 257 p. (in Russian)
5. Egay V.S. *Razvitie terapii v Sibiri (M.G. Kurlov i ego shkola) [The development of therapy in Siberia (M.G. Kurlov and his school)]*. Novosibirsk: Nauka, 1981. 112 p. (in Russian)
6. Gubergrits A.Ya. *V.P. Obratsov i ego shkola [Obraztsov and his school]*. Moscow: Meditsina, 1990. 71 p. (in Russian)
7. Shilinis Yu.A. *Istoriya formirovaniya napravleniy obshchey patologii i nauchnoy shkoly A.B. Fokhta [The history of the development of general pathology and the research school of A.B. Voigt]*. Dissertation for doctor of medical sciences. Moscow, 1994. (in Russian)
8. Almazov V.A., Shlyakhto E.V. *Akademik G.F. Lang i ego shkola [Academic G.F. Lang and his school]*. Moscow, 1999. 78 p. (in Russian)
9. Borodulin V.I., Topolyanskiy A.V. *Moskovskie terapevticheskie shkoly. 20-e – 40-e gody 20-go veka [Moscow therapeutic schools. 1920s to 1940s]*. Moscow, 2013, 2014. P. 365–373. (in Russian)
10. Kolesov V.I. *Stranitsy iz istorii otechestvennoy khirurgii [Pages from the history of domestic surgery]*. Moscow: Izd-vo AMN SSSR, 1953. 284 p. (in Russian)
11. Zabludovsky P.E. *Istoriya otechestvennoy meditsiny [The history of domestic medicine]*. Moscow: CIU vrachej, 1960. 389 p. (in Russian)
12. Lushnikov A.G. *Istoriya russkoy i sovetskoy vnutrenney meditsiny. V kn.: Mnogotomnoe rukovodstvo po vnutrennim boleznyam [The history of Russian and Soviet internal medicine. In: A multi-volume guide to internal medicine]*. Ed. A.L. Myasnikov. Moscow: Medgiz, 1963. Vol. 10. P. 555–556. (in Russian)
13. Gukasyan A.G. *Evolyutsiya otechestvennoy terapevticheskoy mysli (po materialam konferenciy i s'ezdov terapevtov) [The evolution of domestic therapeutic ideas (based on therapists' conferences and congresses)]*. Moscow: Medicina, 1973. 368 p. (in Russian)

14. Salyamon L.S. *Bifunktional'nost' nauki i nekotorye problemy nauchnykh shkol*. V kn.: *Shkoly v nauke [The bifunctionality of science and several problems of scientific schools]*. In the publication: *Schools in science*. Moscow: Nauka, 1977. P. 181–186. (in Russian)
15. Borodulin V.I. *Ocherki istorii otechestvennoy kardiologii [Essays on the history of Russian cardiology]*. Moscow: Meditsina, 1988. P. 150–154. (in Russian)
16. Borodulin V.I., Glyantsev S.P. *Nashi podhody k izucheniyu problemy nauchnykh klinicheskikh shkol v Rossii*. V kn.: *ROIM: Trudy po istorii meditsiny: Al'manakh [Our approaches to the study of the problems of scientific clinical school in Russia]*. In: *Historiae medicinae scriptorium Rossicorum JHERA medica historica*. Ed. S.P. Glyantsev. Moscow, 2016. Vol. 1. P. 227–228. (in Russian)
17. Strazhesko N.D. *Strofantin kak lechebnoe sredstvo [Strofantin as a therapeutic substance]*. Kiev, 1910. (in Russian)
18. Borodulin V.I., Sorokina T.S., Topolyanskiy A.V. *Klinicheskaya meditsina v 20-m veke. Ocherki istorii [Clinical medicine in the 20th century. Historical outlines]*. Moscow: RUDN, 2012. (in Russian)
19. Zimnitsky S.S. *Sovremennoe uchenie o vospalitel'nykh i degenerativnykh protsessakh v pochkakh*. V kn.: *Trudy sed'mogo s'ezda rossiyskikh terapevtov [The modern doctrine of inflammatory and degenerative processes in the kidneys]*. In: *Proceedings of the Seventh Congress of Russian physicians*. Moscow – Leningrad: GIZ, 1925. P. 448–452. (in Russian)
20. Multanovsky M.P. *Istoriya meditsiny [History of medicine]*. Moscow: Medgiz, 1961. 343 p. (in Russian)
21. Borodulin V.I., Topolyanskiy V.D. *Dmitriy Dmitrievich Pletnev [Dmitriy Dmitrievich Pletnev]*. *Voprosy istorii*. 1989. 9: 36–54. (in Russian)
22. Myasnikov A.L. *Moya zhizn' (vospominaniya). Istoricheskiy vestnik MMA im. I.M. Sechenova [My life (memoirs)]*. In *Historical gazette of the I.M. Sechenov Moscow Medical Academy*. Moscow, 2001. Vol 13. P. 5–78. (in Russian)
23. *Uchreditel'naya sessiya Akademii meditsinskih nauk SSSR 20–22 dekabrya 1944 g. [The constitutive session of the USSR Academy of Medical Sciences, December 20–22, 1944]*. Moscow, 1945. 180 p. (in Russian)
24. *Sozdanie Akademii meditsinskih nauk SSSR*. V kn.: 60 let Rossiyskoy akademii medicinskikh nauk *[The creation of the USSR Academy of Medical Sciences]*. In: *Sixty years of the Russian Academy of Medical Sciences*. Ed. V.I. Pokrovsky. Moscow, 2004. 490 p. (in Russian)
25. Borodulin V.I. *Klinicheskaya meditsina ot istokov do 20-go veka [Clinical medicine from its origins to the 20th century]*. Moscow, 2015. 504 p. (in Russian)

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