

История развития эндокринологии в Республике Татарстан

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14 мая 2014 г. исполнилось 200 лет со дня создания врачебного отделения Императорского Казанского университета (Казанского государственного медицинского университета). С XIX века ученые Казанской медицинской школы изучали физиологию и патологию эндокринной системы. Первые исследователи интересовались проблемами эндемического зоба, сахарного мочеизнурения, работой надпочечников. В 1976 г. в Казанском государственном медицинском институте, первая среди ВУЗов РСФСР, была организована кафедра эндокринологии. Заведующий кафедрой В.В. Талантов стал главным внештатным эндокринологом Министерства здравоохранения Республики Татарстан (МЗ РТ), организатором ассоциации врачей-эндокринологов РТ, при его непосредственном участии организована эндокринологическая служба республики, начато преподавание эндокринологии как самостоятельной дисциплины. Он являлся членом научного совета по эндокринологии Российской академии медицинских наук (РАМН), заместителем председателя проблемной комиссии по эндокринологии Министерства здравоохранения Российской Федерации, членом редакционных советов 4 медицинских журналов. В настоящее время на курсе эндокринологии Казанского государственного медицинского университета активно продолжают исследования в области эндокринологии, приоритетным направлением выбрано углубленное изучение и исследование различных аспектов патогенеза сахарного диабета и его осложнений.

Ключевые слова: Казанский медицинский университет; эндокринология; эндокринная служба; сахарный диабет; эндемический зоб

History of the development of endocrinology in the Republic of Tatarstan

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May 14, 2014 marks 200 years since the establishment of the Medical Department of the Imperial Kazan University (now Kazan State Medical University, KSMU). Since the XIX century, scientists of the Kazan Medical School studied physiology and pathology of the endocrine system. The first researchers were interested in the problems of endemic goitre, diabetes mellitus, and function of the adrenal glands. In 1976, the Endocrinology Department was organised in the Kazan State Medical Institute, the first among universities of the RSFSR. The head of the Department, V.V. Talantov, became the chief non-staff endocrinologist of the Ministry of Health of the Republic of Tatarstan (RT) and organiser of the Association of Endocrinologists in the RT. Moreover, he contributed to the organisation of the endocrine service in the republic and endocrinology began to be taught as an independent discipline. V.V. Talantov was a member of the Scientific Council of Endocrinology of the Russian Academy of Medical Sciences, Deputy Chairman of the Committee of Endocrinology Problems of the Ministry of Health, and a member of the editorial boards of four medical journals. The research in the field of endocrinology is now actively continued on the endocrinology course at KSMU. In-depth study of various aspects of the pathogenesis of diabetes and its complications was selected as the first-priority.

Keywords: Kazan Medical University; endocrinology; endocrine service; diabetes, goitre

DOI: 10.14341/DM20142133-136

The Kazan School of Endocrinology was established 200 years ago. The first studies conducted by K.F. Fuchs were devoted to endemic goitre. During the 19th century, scientists at the Kazan University began to study the physiology and pathology of the endocrine system.

The first known scientific manuscript on the pathology of the endocrine system (pathology of the thyroid gland) in Kazan and Kazan Province was written in 1840 by the famous scientist Karl Fedorovich Fuchs (Karl Friedrich Fuchs) and his wife Aleksandra Fuchs, titled 'Studies of the Chuvash and Mari people by A.A. Fuchs.' The study was executed by Aleksandra Fuchs who had no special medical education. As a member of

the expedition, she went to Kazan Province and studied the incidence of goitre among the population. K.F. Fuchs was the author of the section titled 'Answers to the Wife's Letters' [1].

At approximately the same time, Nikolay Andreevich Vinogradov (Fig. 1), Professor of Medicine and incoming Head of the Division of Special Pathology and Therapy of the Medical Department of Kazan University and a member of Virchow's laboratory, conducted the research titled 'The essence of diabetes mellitus'. Several of his manuscripts were published, including 'The essence of diabetes mellitus' (*Voенно-медицинский Журнал*, 1862), 'Über künstlichen und natürlichen diabetes mellitus' ('Virchow's Archiv'; 'Artificial



Fig. 1. N.A. Vinogradov



Fig. 2. V.V. Pashutin

and natural diabetes mellitus') and 'Beiträge zur lehre über diabetes mellitus' ('*Virchow's Archiv*'; 'Contribution to the study on diabetes mellitus'. These papers attracted considerable attention among members of the medical society, including medical professionals, in Kazan [2, 3].

In 1874, Viktor Vasil'evich Pashutin (Fig. 2) was elected to the position of Extraordinary Professor, Division of General Pathology, Kazan University. One area of his research focused on metabolic disorders. He was the first to analyse the pathological deposition of glycogen in tissues and introduced the concept of carbohydrate degradation. The results of his studies form the basis of Pashutin's theory on the pathogenesis of diabetes mellitus [3].

In 1907–1909, Mikhail Nikolaevich Cheboksarov (Fig. 3) began investigations on the physiology and pathology of the adrenal gland [4]. His thesis titled 'Secretory nerves of the adrenal gland' (1910) became a classic that received worldwide recognition. It marked the start of a new trend in the physiological laboratory, because at that time, the Physiology Division started investigating the physiology of the endocrine system.

In 1912, M.N. Cheboksarov delivered the introductory lecture 'The endocrine system (towards studying hormones)'. In 1914, he went to the Sorbonne, Paris, to study research procedures with the famous Professor Gley as well as to continue research on adrenal gland physiology that he started in Kazan [4].

Endemic goitre was intensively studied in Kazan. In 1927, the concepts of the clinical presentation and nature of endemic goitre were presented in papers by Professor and Head of the Hygiene Division of Kazan University, Valerian Vladimirovich Miloslavskiy. In 1930–1931, V.V. Miloslavskiy and L.I. Los' studied the pathogenesis of endemic goitre in the Ural region. V.V. Miloslavskiy believed that the problem of endemic goitre could be solved by studying the impact on metabolism of the proportion of microelements and vitamins in the environment as well as in organisms. Prof. Ya.M. Miloslavskiy and his successors made a major contribution to the investigation of the pathology of the adrenal cortex [2, 3].

In 1961, the 6th Municipal Clinical Hospital opened in Kazan. A special department for patients with endocrine system pathology was provided here for the first time [3].

In 1962, at the USSR Conference of Endocrinologists, Vsevolod Vasil'evich Talantov (Fig. 4), a delegate of the Kazan Medical Institute, proposed that endocrinology should be included in the curriculum of medical universities as a new discipline, because he believed that successful treatment of endocrine diseases is possible with early diagnosis and that early detection should be conducted by general practitioners. The first elective course of lectures was established in 1963. The first specialised endocrinology course was organised during 1967–1968 at the Division of Hospital Therapy [2], and clinical endocrinology was included as a discipline in the curriculum of the Kazan Medical Institute. The Endocrine Department of the 6th Municipal Clinical Hospital provided the clinical foundations for the new endocrinology course.

In 1976, the Endocrinology Course was reorganised into the Endocrinology Division, the first among the universities in the RSFSR [2], and V. V. Talantov was elected its head. In 1980, V.V. Talantov suggested organising the Endocrine Unit of the Republican Clinical Hospital, then under construction, which would serve as the future Endocrinology Division [5]. In 1967, V.V. Talantov was appointed as the chief non-staff endocrinologist of the Ministry of Health of the Republic of Tatarstan (RT). Undoubtedly, V.V. Talantov founded the endocrine service in the RT. He also organised the Association of Endocrinologists in the RT (1967) and was its president for almost 30 years [6]. V.V. Talantov created the School of Physicians and Researchers and contributed to the organisation of the endocrine service in the RT as well as teaching endocrinology as an independent discipline. V.V. Talantov was a member of the Scientific Council of Endocrinology of the Russian Academy of Medical Sciences (RAMS), the Deputy Chairman of the Committee of Endocrinology Problems of the Ministry of Health and a member of the editorial boards of four medical journals [6].

The contribution of the Endocrinology Division of Kazan Medical Institute to the epidemiology of complications of diabetes mellitus was recorded in the order of the Ministry of Health of RSFSR, Number 558, dated 4 October 1978, 'About the measures on improvement of organisation and quality of medicinal treatment for patients suffering from endocrine diseases in the RSFSR' [7]. In particular, studies of the postinjection complications of insulin therapy conducted at the Endocrinology Division included clinical, experimental, neurohistochemical and radiobiochemical research. Studies by E.N. Khasanov (1976, Fig. 5) were devoted to electrolyte shifts and hyperaldosteronism in patients with decompensated diabetes mellitus and those by T.V. Bulatova (1977) focused on conditions such as metabolic acidosis that were of fundamental and practical interest. The traditional interest in endocrinology was maintained through a number of fundamental studies conducted in Kazan. For example, Prof. L.A. Lushnikova studied the functional status of the endocrine system in patients with atherosclerosis.

The understanding of endocrinology gained by research conducted in higher educational institutions and from the experience of those engaged in practical endocrinology laid



Fig. 3. M.N. Cheboksarov



Fig. 4. V.V. Talanov



Fig. 5. E.N. Khasanov



Fig. 6. F.V. Valeeva

the foundations for further development of the endocrine service [8]. Qualified physicians and researchers were trained by taking advanced courses, clinical residencies, internships and postgraduate programmes on endocrinology. The Endocrinology Division of the Kazan State Medical University became the main division teaching endocrinology under the Ministry of Health of the USSR. The staff of the Endocrinology Division developed programmes for teaching endocrinology in medical institutions. Chief non-staff endocrinologists of the Ministry of Health of the RT and Healthcare Administration of Kazan who specialised in treating adults or children (V.V. Talantov, T.V. Bulatova, L.M. Sultanova, E.N. Khasanov, S.T. Zyngirova, F.V. Valeeva, and I.G. Shalennaya) were trained in the Endocrinology Division of Kazan State Medical University.

Marked changes have occurred in the diagnosis and treatment of diseases of the endocrine system. Current diagnostic methods include analyses of a broad range of hormones, isotopic assays, computed tomography and ultrasound examinations. The test for glycated haemoglobin is performed for patients suffering from diabetes mellitus to evaluate the quality and efficiency of therapy, and the microalbuminuria test is used for early diagnosis of diabetic nephropathy. Efficient methods such as the basis-bolus and intensified regimens of insulin therapy are now used to treat diabetes mellitus. The patients are taught self-management (school for people with diabetes mellitus). Ophthalmologists treat diabetic retinopathy using laser photocoagulation to preserve vision. Some organisational problems and the medical tactics concerning the treatment of patients with severe forms of diabetic nephropathy have been solved together with nephrologists.

It is of primary importance to reduce of the number of cases of lower-extremity amputation. To address this issue, several diagnostic and clinical approaches used to manage diabetic foot syndrome were developed, including coordinated management of patients by a neuropathologist, a vascular surgeon and an orthopaedic traumatologist. The procedure and principles of emergency assistance rendered to patients in diabetic coma admitted to the healthcare unit were developed together with a resuscitator. An original method for treating autoimmune endocrine ophthalmopathy accompanying thyroid gland disorders was developed and is

in routine use.

In 1996, according to an order of the Ministry of Health of the RT, Number 131, dated 2 February 1996, the Republican Registry of patients with diabetes mellitus was organised in the Republican outpatient clinic. Its purpose is to provide long-term automated personal registration of patients with diabetes mellitus, to evaluate the epidemiological factors and to record complications of diabetes mellitus, disability and mortality.

Today, the main research focus of the Endocrinology Course of the Endocrinology Division of Kazan Medical University, headed by Prof. Farida Vadutovna Valeeva (Fig. 6), is further in-depth investigations of various aspects of the pathogenesis of diabetes mellitus and its complications. Since 1990, F.V. Valeeva has been engaged in research on the insufficiently studied subject of diabetes mellitus that occurs during pregnancy. A protocol for treating pregnant women with diabetes mellitus was developed in the RT under her supervision. Moreover, hospital care was organised in the Perinatal Centre at the Republican Clinical Hospital (Ministry of Health of the RT) to serve women residing all over the RT.

The newest technologies are now introduced. For example, pregnant women with diabetes mellitus are managed using a continuous insulin infusion system (insulin pump). Problems with providing this system to patients unable to afford care were successfully solved. The modern method to control blood glucose levels, daily blood glucose monitoring, is now provided. Because of these efforts, hundreds of pregnant women with diabetes mellitus have been able to become mothers. The staff of the Endocrinology Course has significantly increased because of the involvement of young specialists. The staff of the Endocrinology Course at the Hospital Therapy Division of Kazan State Medical University includes F.V. Valeeva (Doctor of Medical Sciences, Professor, Head of the Endocrinology Course), E.N. Khasanov (Candidate of Medical Sciences, chief non-staff endocrinologist of the Ministry of Health of the RT) and assistants T.N. Kiseleva (Candidate of Medical Sciences), Z.R. Alimetova (Candidate of Medical Sciences), T.Yu. Kufelkina (Candidate of Medical Sciences), T.N. Akhmetzyanova, G.R. Gazizova, L.R. Gaysina and M.R. Shaydullina. The staff teaches students and trains physicians

(interns and residents), and their number increases each year. Republican scientific and practical conferences are held twice each year and present sessions on recent achievements in diabetology and endocrinology research.

In 2012, F.V. Valeeva was awarded the Prize of the Government of the Russian Federation in the field of science and technology for her study titled 'Elaboration and introduction of the modern techniques of diagnosis, treatment and prevention of diabetes mellitus to the

healthcare practice of the Russian Federation' together with the chief endocrinologists of the Russian Federation (I.I. Dedov, G.R. Galstyan, T.L. Kuraeva, A.Yu. Mayorova, V.A. Peterkova, Yu.I. Suntsov, M.V. Shestakova and I.A. Bondar').

Therefore, the development of the endocrine service in the RT occurred under specific conditions and is based on traditional interest in endocrinology that originated in Kazan almost 200 years ago.

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