## Short Reports

## EPIDEMIOLOGY OF MULTIPLE DRUG ALLERGY

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To study the risk factors the questioning of 17 adult patients with multiple drug allergywas held. In examined group we did not find any significant connections between active taking of medicines, occupational harm and health state with development of polysensibilization to drugs. Probably, the development of multiple drug allergy if connected mainly with internal reasons, not external. The only fact – high frequency of thyroid diseases among people with drug allergy may probably be explained with high risk of pseudoallergic reactions in this group, but not with polysensibilization.

**Introduction.** Phenomena of multiple drug sensitivity is not an exceptionally rare event, but the risk of its development is not studied enough [1–4]. In the territory of ex-USSR self-treatment and polypharmacy are widely developed, which extremely increases the risk of multiple drug allergy [5].

**Method.** To study the risk factors the questioning of 17 adult patients with multiple drug allergy was held (reaction to 3 and more medicines, without connections in chemical content, with the features of allergy, which is confirmed by allergologist). To compare, 26 patients with multiple drug allergy (clinically significant reaction to one medicine, confirmed by allergologist), addressed in the same period of time. All the patients – women. All the patients do not have any indications of allergy, except drug allergy. Frequency and criterion  $\kappa$ -sqPirsonas by using the exact criterion of Fisher.

**Results**. Group of patients with drug allergy may be characterized as: average age -44, 7,6% show the father's heredity, 15,3% show the mother's heredity. 34,6% show that in the last 5 years they addressed the doctor with gastro- intestinal diseases (gastritis, pancreatitis), 15,7% say that in the same period they addressed the doctor with cholecystitis, 30,7% are followed up by endocrinologist with the problems of thyroid. In 11,5% of cases they have professional contact with medicines and chemicals. For the question: «Do you think you often used medicines for treatment» 23 % answered «yes». Average age of patients with multiple drug allergy was 48 years. Among the questioned 11,7% allergic difficulties was father's heredity, nobody showed the mother's one. 35,2% of patients in the last 5 years addressed to doctor with chronic gastro-intestinal diseases (gastritis, pancreatitis), inb 17,6% of cases with cholecystitis. 7,6% are followed up by endocrinologist ( $p \le 0.05$ ). In 29,4% of cases patients had professional contact with medicines and chemicals. Навопрос «Do you think you often used medicines in your life» 47% answered «yes»

Conclusion: In examined group we did not find any significant connections between active taking of medicines, occupational harm and health state with development of polysensibilization to drugs. Probably, the development of multiple drug allergy if connected mainly with internal reasons, not external. The only fact – high frequency of thyroid diseases among people with drug allergy may probably be explained with high risk of pseudoallergic reactions in this group, but not with polysensibilization.

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### PROBLEMS AND PROSPECTS OF MEDICAL REHABILITATION DEVELOPMENT IN KAZAKHSTAN

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Universal health deterioration of the population, the growth of primary disease and the chronization of diseases caused the increased demand for medical rehabilitation.

Medical rehabilitation care in the RK is relatively young and is in need of highly qualified personnel, regulation of staff standards for medical rehabilitation specialists, development of approaches to the estimation and planning of the number of medical rehabilitation personnel.

Currently rehabilitation of sick and disabled people is one of the priority directions in medicine that helps to return millions of sick and disabled people to the sphere of socially useful life.

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Traumatism, congenital and acquired musculoskeletal diseases, heart attacks and strokes are important problem in modern healthcare due to the high level of prevalence, temporary and permanent disability and mortality of the population [1-2].

The number of disabled persons in Kazakhstan as of January 1, 2011 is 563.1 thousands people, including 45,8 thousands disabled children (Statistical Abstract. Astana, 2012).

60% of deaths in developed countries are shared by myocardial infarction and stroke. Up to a quarter of those patients die within the first month after the onset of disease, and up to 30% – within the first year. The percent of full recovery is not more than 20% of the survived.

According to the WHO, the aggregate value of direct and indirect costs per one stroke patient is 55–73 thousands US dollars, accounting for about 4–5% of total health expenditure. Indirect costs related, for example, with job losses, cannot be calculated and considerably exceed expenses [3].

A new «Medical Recreation Therapy, Rehabilitation Treatment» discipline specialization (Health Ministry of the Republic of Kazakhstan Order № 774 dated 24.11.2009) was implemented in 2009 in Kazakhstan and joined together physical therapists and doctors in exercise therapy and balneology. Unification of these disciplines is based on common approaches to disease prevention aimed at correcting functional and adaptive capabilities of the body by comprehensive and differentiated use of non-pharmacological technologies for restoration and compensation of impaired functions of sick and disabled people.

Departments or courses of Medical Rehabilitation were opened in all medical universities of the Republic and joined pre-existing Department of Exercise and Physical Therapy. Currently, trainees in this discipline are doctors who pass CME and retraining cycles. This situation has developed due to the fact that hours of Medical Rehabilitation were not provided in the SCES-2009 and this important discipline became an elective. Thus, Kazakh «new generation» graduates, finishing higher education institution, practically don't know even basics of physical therapy, exercise therapy, balneology and, especially, medical rehabilitation.

The first set of residents – medical rehabilitation specialists has started since 2010–2011, specialists training and retraining in medical rehabilitation is taught in parallel at the faculties of post-graduate education. New rehabilitation centers are opened in the country, including on the basis of state-private partnership, the program for stroke centers construction is approved.

At the same time, the lack of qualified professionals among medical rehabilitation specialists remains an important issue to implement the principles of medical rehabilitation: early start, phasing, continuation, continuity, complexity and individual approach. There are only 373 medical rehabilitation specialists now in the RK (2,2 per 100 thousand population), including 230 certified physiotherapists, 60 - doctor of exercise therapy, and only 83 certified as medical rehabilitation specialists (Record form N<sub>2</sub> 30 for administrative data collection, 2012).

Medical rehabilitation has been recognized around the world and supported by the state and national health systems. More than 13 thousands professionals in the field of physical therapy and rehabilitation medicine worked in Europe in 2007. Rehabilitation was officially recognized in Sweden in 1969, in Scotland – 1975, in Great Britain – 1989, and received the official status in the USA in 1947. Historical sketch presented in the works of F. Yunusov et al. (2004) suggests that medical rehabilitation was officially recognized in Europe in the 60–70th years of the last century [4].

F. Yunusov et al. (2004) notes that back in 1947 the American Board of Medical Specialties recognized physical medicine and rehabilitation as an independent field of medicine. The only difference is that in the USA this field of medicine is called «physiatrics», and doctors of this specialization – «physiatrist» [5]. In the world practice, physiotherapists and doctors in exercise therapy are combined by the term «physical therapist».

The forms of rehabilitation are various in different countries, but the goals and challenges facing them are the same.

The main goal of medical rehabilitation is to achieve full recovery of disturbed due to illness or injury, or if it is impossible – the optimum realization of physical, mental and social potential of the disabled person, his most adequate integration in society (WHO Expert Committee, 2008).

Implementation of this area indicates the need to regulate staff standards for medical rehabilitation specialists, to develop approaches to the estimation and planning of the number of medical rehabilitation personnel.

Analysis of the existing regulations (Health Ministry of the Republic of Kazakhstan Order  $\mathbb{N}$  238 dated 7.04.2010,  $\mathbb{N}$  774 dated 24.11.2009, Record Form  $\mathbb{N}$  30), which define the staff structure of health institutions, revealed a number of discrepancies in the regulation of the work of medical rehabilitation specialists and interpretations of the regulatory language. Thus, the definitions of doctors in Physical Therapy and Exercise Therapy are still different, but according to the approved nomenclature of medical specialities, there is a speciality Medical Rehabilitation, but there are no specialities Physical Therapy and Exercise Therapy.

Time limits for patients are developed separately for physiotherapist and for doctors in Exercise Therapy. Thus, according to the Health Ministry of the Republic of Kazakhstan Order № 238, recommended time for exercise therapy doctor consultation per one patient is insufficient (15 minutes), because only one functional test needs 10–20 minutes. 15 minutes for each different body part massage won't allow to achieve the desired therapeutic effect.

Time for physiotherapeutic procedures carrying out is given without any justification. For example, 4 minutes are specified for magnetic therapy while the software of new physiotherapeutic equipment, intensively supplied to the health institutions of Kazakhstan, includes the range of time for this procedure from 6 to 20 minutes.

This situation doesn't promote efficiency of medical rehabilitation, especially according to the developed Standard of the organization of rehabilitation care which provides for the introduction of unified criteria to assess functional disorders in respect of patients with cardiac, neurological and musculoskeletal pathologies.

In this regard we offer the following ways to optimize medical rehabilitation care in Kazakhstan:

1. To define functional responsibilities for rehabilitation specialist.

2. To optimize the regulatory framework to calculate the staff and workload for professionals engaged in rehabilitation and recovery treatment.

3. To develop staff standards for adult rehabilitation centers due to the stroke centers construction and setting into operation in all regions of the country.

4. To align time limits for physiotherapeutic procedures taking into account continuously improving health technologies and software requirements of equipment.

5. The issues of the organization of medical rehabilitation are closely related with training. In different countries, training of medical rehabilitation specialists is different: in some countries is differentiated by narrow specialties due to the opening of medical rehabilitation offices and centers for specific patient contingents, in other countries – students' education is based on the integrated training in rehabilitation methods in combination with preventive and curative aspects. This approach is designed to encourage all doctors to carry out rehabilitation as an integral part of their daily work (non-specialized approach).

Medical rehabilitation along with other medical disciplines should be included in medical universities' and colleges' curriculum at least in the form of an integrated training, binary seminars for all clinical disciplines with involvement of the Medical Rehabilitation Departments faculty to deliver sections related to the rehabilitation of patients with different pathology.

6. To modernize educational process for all clinical specialties: to introduce the integrated training in medical rehabilitation and recovery treatment of patients with the relevant nosologies.

Rehabilitation should be early and continuous, complex and individual, start with the first minutes of patient health encounter. This approach requires knowledge and skills of rehabilitation by physicians of all specialties.

In this regard, advanced training of «narrow» specialists on early medical rehabilitation in their specialty without getting primary specialization in medical rehabilitation should be permitted, and these hours (credits) should be taken into account at assigning qualification category.

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