https://doi.org/10.32921/2225-9929-2024-3-57-22-27
UDC 616-036.882-08; 616.8
IRSTI 76.29.45; 76.29.51

Original article

Study of hospitalized cases associated with acute cerebrovascular accidents

Rauan Kastey [1], Malika Turganova [2], Anuar Akhmetzhan [3], Kamila Faizullina [4], Vidmantas Vaičiulis [5]

[1] PhD student, Public health department, Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan. E-mail: ahiles-18@mail.ru

[2] Head of the Department of Medical and Social Rehabilitation, Department of Maternal and Child Health, Ministry of Health, Astana, Kazakhstan. E-mail: malika_turganova@mail.ru

[3] Associate Professor, Health policy and management department, S. Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan. E-mail: akhmetzhan@rambler.ru

[4] Associate Professor, Health policy and management department, S.Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan. E-mail: kamila.aaa@mail.ru

[5] Associate Professor, Faculty of Public Health, Department of Environmental and Occupational Medicine, Lithuanian University of Health Sciences, Kaunas, Lithuania. E-mail: vidmantas.vaiciulis@lsmu.lt

Abstract

Proper organization of the system for providing medical care to patients with cerebral stroke will reduce mortality and reduce the level of disability. All activities are aimed at creating unified principles of diagnostic approaches and management of patients with stroke. A significant role is given to primary prevention by optimizing the system of medical care for stroke patients. Coordinating centers for cerebrovascular pathology and stroke are being created.

***The purpose** of our study is to analyze cases of hospitalization of patients with acute cerebrovascular accidents from 2012 to 2022 in Almaty city.*

***Methods.** A retrospective study was conducted. The data analysis period was from 2012 to 2022. The analysis data included the age of the patients, the days spent in bed, the outcome of the disease, emergency or planned admissions. Data analysis was carried out using SPSS 13 program.*

***Results.**The age of patients with acute cerebrovascular accidents fluctuated within 10 years in the range of 59.8 as well as bed days was 11.46. The number of the emergency hospitalization was higher in comparison to planned; however, it was positive dynamics last five years. In addition, from 2012 the mortality rate decreased whereas recovery increased which means there are better results and accept to health facilities.*

***Conclusion**. The introduction of stroke programs, as well as improvements in primary health care, have allowed us to improve care for patients. While the prevention and treatment programs still need to be continually improved, taking into account age, gender, risk factors and other factors.*

***Keywords:** acute cerebrovascular accidents, stroke, hospitalization, bed-days, Kazakhstan.*

Corresponding author: Rauan Kastey, PhD-student of the educational program 6D110200- "Public health", S.Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan.
Address: Kazakhstan, Almaty, Tole Bi st. 94
Postal code:A05H2A6
Phone: +77471944906 E-mail: ahiles-18@mail.ru

J Health Dev 2024; 3 (57): 22-27
Recieved: 05-08-2024
Accepted: 12-08-2024

This work is licensed under a Creative Commons Attribution 4.0 International License

Introduction

Acute cerebrovascular accident is one of many other pressing problems around the world with depressing rates of morbidity and mortality, as well as disability. Stroke is characterized as a neurological deficit associated with acute focal damage to the central nervous system from a vascular cause [1]. Cerebrovascular disease, which includes ischemic and hemorrhagic stroke, is the third most common cause of death worldwide, with a mortality rate of 86.5 per 100,000 person-years [2]. More than 700 thousand people suffer from stroke each year in the United States, up to 500 thousand people in Canada, up to 1 million people in the European Union, and in the world the number of cases can reach 10 million. The average prevalence of stroke is 200 cases per 100 thousand population annually, although it varies in different regions and depends on race and many other factors [3].

A systematic and meta-analysis found that over the past 40 years, the overall incidence of intracerebral hemorrhage is 29.9 per 100,000 person-years, which has not decreased worldwide, where the incidence in Asian populations is significantly higher than in other continents [4]. Another systematic review found that the cumulative incidence of intracerebral hemorrhage was highest in lower-middle-income countries [5]. Epidural hematomas are present in approximately 2% of patients with traumatic brain injury and account for 5% to 15% of fatal head injuries. The incidence of subdural hematoma is estimated to be between 5% and 25% of patients with major head trauma, while subarachnoid hemorrhage accounts for approximately 5% of all strokes and occurs in approximately 2 to 25 per 100,000 person-years among persons over 35 years of age, and also, intraparenchymal hemorrhages account for 10% to 20% of all strokes [6]. The authors note that globally in 2019, the cost of lost wealth due to stroke was $2059.67 billion, or 1.66% of global GDP; of the subtypes for ischemic stroke was $882.81 billion) for intracerebral hemorrhage was $212.36 billion US dollars, for subarachnoid hemorrhage [7].

In the Republic of Kazakhstan, strokes are in third place in terms of prevalence after diseases of the circulatory system and malignant tumors. According to statistics, in 2015, more than 40 thousand Kazakhstanis suffered a stroke, of which in 24% of cases it was fatal. The incidence in the country ranges from 2.5 to 3.7 cases per 1000 people per year, and the mortality rate ranges from 100 to 180 cases per 100 thousand people, and disability is 104.6 per 100,000 population [8].

Over the past decade, a number of programs and a road map have been introduced to improve the provision of medical care for diseases of the circulatory system, stroke, and injuries in the Republic of Kazakhstan for 2022-2023 [9]. In addition, new treatment methods have been introduced in the regions, as well as high-tech medical services to reduce deaths from heart disease, including stroke and other.

The purpose of our study is to analyze cases of hospitalization of patients with acute cerebrovascular accidents from 2012 to 2022 in Almaty city.

Methods

The analysis was carried out based on data from the Salidat Kairbekova National Research Center for Health Development in Almaty. Cases were analyzed according to International Disease Classification Code 10 (ICD-10):

- I60.0- I60.9 (Subarachnoid haemorrhage);
- I61.0-I 61.9 (Intracerebral haemorrhage);
- I63.0-I63.9 (Cerebral infarction);
- I69.0-I69.4 and I69.8 (Sequelae of cerebrovascular disease);
- I70.0- I70.2 and I70.8, I 70.9 (Atherosclerosis);
- I78.0- I78.1 and I78.8 (Diseases of capillaries).

The data analysis period was 10 years from 2012 to 2022. The analysis data included the age of the patients, the days spent in bed, and the outcome of the disease. The analysis also included data from emergency or planned admissions. Data analysis was carried out using SPSS 13 program.

The study approved at local ethics committee of the Kazakh National Medical University.

Results

Our analysis showed that the age of patients with acute cerebrovascular accidents fluctuated within 10 years in the range of 54.49 years and 61.97 years (Table 1).

Table 1 - Characteristics of patients with acute cerebrovascular accidents

Years	N	Age of patients	Bed days spent
		Mean± Std. Deviation	Mean± Std. Deviation
2012	63	54.49±25.01	10.21±9.76
2013	124	50.24±24.52	10.88±10.26
2014	142	60.2±15.38	14.09±31.66
2015	185	58.79±16.73	12.85±12.64
2016	269	61.07±14.86	11.37±8.93
2017	262	61.4±15	10.72±8.39
2018	251	61.49±15.07	11.9±8.3
2019	179	61.97±15.48	12.79±13.1
2020	89	63.34±13.29	8.63±6.95
2021	108	57.67±20.11	10.59±6.87
2022	191	59.73±13.88	10.09±6.47
Total	1863	59.8±16.84	11.46±12.64

In general, it is worth noting that the number of patients in this nosology group grew from 2012 to 2017 from 63 cases to 269, after which there was a sharp decrease until 2020 (89 patients), and then increased to 191 cases in 2022. Over the course of ten years, the average bed days of hospitalized cases was 11.46 days. However, the largest number of days is observed in 2014 and 2019 (Table 1).

Cases of emergency hospitalization of patients with this category of nosology are higher than planned ones, which is due to the specifics of the disease. Nevertheless, there is a positive trend in reducing emergency hospitalization cases from 95.2 in 2012 to 53.9 in 2022. The peak increase in cases of urgent hospitalization was 99.4 in 2019 (Figure 1).

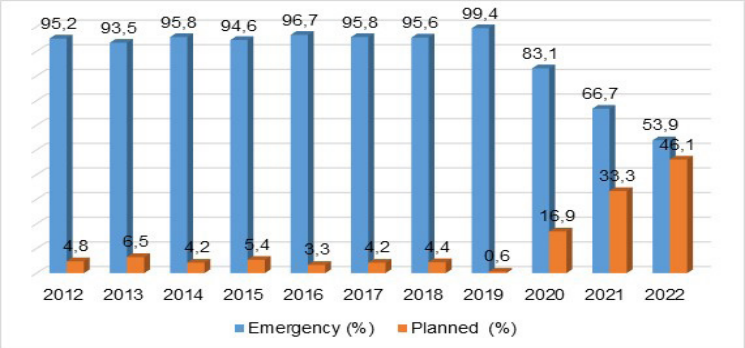

Figure 1 - Type of hospitalization from 2012 to 2022

Treatment outcome was taken into four categories as death; recovery; no change; and deterioration. The mortality rate was high in 2012 and 2013, but subsequently the dynamics changed to decrease until 2020. The decline was from 50.8% to 15.3% between 2012 and 2017, followed by an increase in 2020 to 27.0%, then a decrease to 14.7% by 2022 (Table 2).

Table 2 - Treatment outcome in four categories during 2012 to 2022

Years	Death		Recovery		No change		Deterioration	
	N	%	N	%	N	%	N	%
2012	32	50.8	29	46,0	2	3.2	0	
2013	63	50.8	58	46,8	1	0.8	2	1.6
2014	41	28.9	90	63.4	11	7.7		
2015	50	27.0	129	69.7	6	3.2		
2016	62	23.0	192	71.4	15	5.6		
2017	40	15.3	180	68.7	41	15.6	1	0.4
2018	47	18.7	189	75.3	15	6.0		
2019	38	21.2	123	68.7	18	10.1		
2020	24	27.0	59	66.3	6	6.7		
2021	22	20.4	81	75.0	5	4.6		
2022	28	14.7	154	80.6	9	4.7		

Regarding recovery cases, the indicator has changed in a positive direction. Patients who were cured in 2012 and 2013 were about 46.0%. However, by 2022 this figure increased to 80.6%. However, there were less downturns between 2019 and 2020 (Table 2).

There are cases when the patient's condition remains unchanged. This indicator varied between 3.2% and 6.7%. However, in 2014, 2017, 2019, the rate was above average and amounted to 7.7%, 15.6% and 10.0%, respectively (Table 2). Deterioration was identified in few cases in 2013 – 1.6% as well as in 2017 – 0.4%.

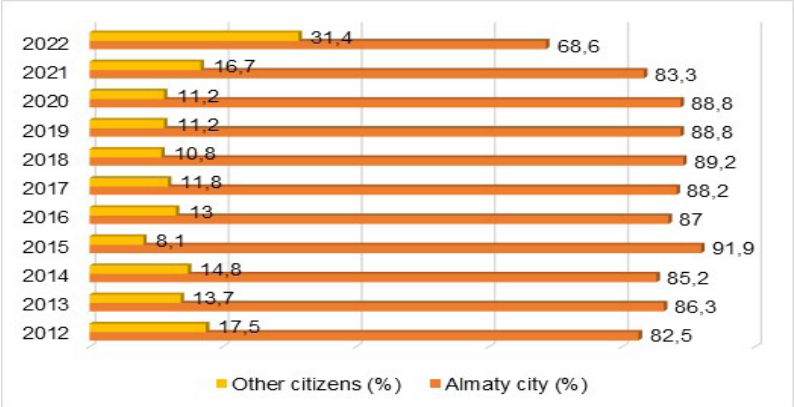

Figure 2 - Hospitalization of residents of Almaty and non-residents

Since the city of Almaty is a metropolis where medical organizations of the republican level are located, patients from other cities are accordingly observed. Thus, in dynamics we see that compared to 2012, the number of nonresident patients decreased from 31.4% to 17.5%, where the peak of the decrease was 8.1% in 2015. This decrease is associated with the development of high-tech services and stroke care programs in the country, within the framework of which regional-level hospitals began to introduce the latest treatment methods and technologies.

Discussion

Assessing and monitoring the country's socio-demographic indicators is a necessary procedure when planning medical expenses for the quality provision of planned and emergency care for acute cerebrovascular accidents. Overall, the studies show that average hospital stays were about 10 days, which is consistent with our data. It is also noted that women have a lower number of days compared to men [10,11]. Stroke can affect people of any age, although it has traditionally been perceived as a disease of older people, with incidence doubling every ten years after age 55 [12]. In recent years, the average age of stroke patients has been decreasing, and the incidence of strokes and hospitalizations among young people has been increasing worldwide [13,14]. Octavian Păun et al. note that most often stroke occurs in people over 50 years of age. Our study also found that patients were hospitalized at this age [15].

Mortality rates were high in 2020, most likely due to the COVID-19. Research confirms the negative impact of COVID-19 on the condition of patients with stroke and cerebrovascular diseases, which are a risk factor for the deterioration of the health [16,17,18].

The idea of risk factors today is scientifically substantiated and is based on assessing the likelihood of developing acute cerebrovascular accidents depending on clinical, biochemical and many other characteristics, including the environment. It was found that often the first symptoms of a stroke, headache, are often overlooked, and therefore there is a risk of emergency hospitalization. In our study, the proportion of emergency hospitalization is still higher than planned; accordingly, measures are required to improve the knowledge of medical specialists on the symptoms of this nosology, for timely detection and diagnosis, and therefore the provision of assistance [19]. In a study of two million adults discharged from the emergency department with a primary diagnosis of headache, 0.5% were hospitalized for a major neurological disorder such as cerebral infarction (18%) and transient ischemic attack (12%) [20].

Secondary complications after intracerebral hemorrhage can worsen outcome and are associated with early death. Of 10,029 patients with spontaneous intracerebral hemorrhage, the cumulative incidence of secondary complications was 39.9% of which were pneumonia (15.1%), cerebral edema (6.5%), cardiac decompensation (5.9%), urogenital infection (5.5%), hydrocephalus (4.6%), epilepsy (3.4%) and rebleeding (3.4%) [21]. In the future, it is necessary to study the frequency of complications that possibly lead to deterioration of the condition; in particular, for our study, the years where the rate of deterioration was the highest would be relevant.

Conclusion

Prevention and treatment still need to be continually improved, taking into account age, gender, risk factors and other factors. The introduction of stroke programs, as well as improvements in primary health care, have allowed us to improve care for patients with acute cerebrovascular accidents, but targeted strategies must be gradually developed in the future.

Conflict of interest. The authors declare no conflict of interest.

No funding.

Authors' contributions. Conceptualization – R.K..; methodology – R,K., M.T.; formal analysis – A.A., K.F.; writing (original draft preparation) – R,K., M.T.; writing (review and editing) – R,K., V.V.

Reference

1. Sacco R.L., Kasner S.E., Broderick J.P., Caplan L.R. et al. An updated definition of stroke for the 21st century: a statement for healthcare professionals from the American Heart Association/American Stroke Association. Stroke. 2013; 44(7): 2064-2064. [Crossref]

2. Lee S.U., Kim T., Kwon O.K., Bang J.S. et al. Trends in the Incidence and Treatment of Cerebrovascular Diseases in Korea: Part I. Intracranial Aneurysm, Intracerebral Hemorrhage, and Arteriovenous Malformation. J Korean Neurosurg Soc. 2020; 63(1): 56-68. [Crossref]

3. Утеулиев Е.С., Конысбаева К.К., Жангалиева Д.Р., Хабиева Т.Х. Эпидемиология и профилактика ишемического инсульта // Вестник Казахского Национального медицинского университета. - 2017. - №4. - С. 122-125. [Google Scholar]

Uteuliev E.S., Konysbaeva K.K., Zhangalieva D.R., Khabieva T.Kh. Epidemiologiia i profilaktika ishemicheskogo insul'ta (Epidemiology and prevention of ischemic stroke) [in Russian]. Vestnik Kazakhskogo Natsional'nogo meditsinskogo universiteta. 2017; 4: 122-125. [Google Scholar]

4. Wang S., Zou X.L., Wu L.X., Zhou H.F. et al. Epidemiology of intracerebral hemorrhage: A systematic review and meta-analysis. Front Neurol. 2022; 13: 915813. [Crossref]

5. Li X., Zhang L., Wolfe C.D.A., Wang Y. Incidence and Long-Term Survival of Spontaneous Intracerebral Hemorrhage Over Time: A Systematic Review and Meta-Analysis. Front Neurol. 2022; 13: 819737. [Crossref]

6. Tenny S., Thorell W. Intracranial Hemorrhage. In: StatPearls [Internet]. Treasure Island (FL): [Updated 2023 Feb 13]. StatPearls Publishing. 2023. [Google Scholar]

7. Gerstl J.V.E., Blitz S.E., Qu Q.R., Yearley A.G. et al. Global, Regional, and National Economic Consequences of Stroke. Stroke. 2023; 54(9): 2380-2389. [Crossref]

8. Акимжанова А.К. Клинико-эпидемиологическая характеристика и реабилитационные мероприятия при мозговом инсульте в г. Семей / автореферат на соиск канд мед наук, 2016.

Akimzhanova A.K. Kliniko-jepidemiologicheskaja harakteristika i reabilitacionnye meroprijatija pri mozgovom insul'te v g. Semej (Clinical and epidemiological characteristics and rehabilitation measures for stroke in Semey) [in Russian].

Avtoreferat na soisk kand med nauk, 2016.

9. Официальный информационный ресурс Премьер-Министра РК. Итоговая коллегия: результаты работы за 2022 год и задачи на предстоящий период обозначили в Минздраве. Интернет-ресурс [Дата обращения: 12.04. 2024] [in Russian]. Режим доступа: https://primeminister.kz/ru/news/reviews/itogovaya-kollegiya-rezultaty-raboty-za-2022-god-i-zadachi-na-predstoyashchiy-period-oboznachili-v-minzdrave-1003858

Ofitsial'nyi informatsionnyi resurs Prem'er-Ministra RK. Itogovaia kollegiia: rezul'taty raboty za 2022 god i zadachi na predstoiashchii period oboznachili v Minzdrave (Official information resource of the Prime Minister of the Republic of Kazakhstan. Final board: the results of work for 2022 and tasks for the coming period were outlined in the Ministry of Health) [in Russian]. Internet-resurs [Data obrashcheniia: 12.04.2024]. Rezhim dostupa: https://primeminister.kz/ru/news/reviews/itogovaya-kollegiya-rezultaty-raboty-za-2022-god-i-zadachi-na-predstoyashchiy-period-oboznachili-v-minzdrave-1003858

10. Xiao T., Ding S., Yan W., He Y. Factors related to the length of hospital stay for cerebrovascular accident. Zhong Nan Da Xue Xue Bao Yi Xue Ban. 2014; 39(9): 907-11. [Crossref]

11. Moraes M.A., Mussi F.C., Muniz L.S., Sampaio E.E.S. et al. Clinical characterization, disability, and mortality in people with strokes during 90 days. Rev Bras Enferm. 2021; 75(2): e20201383. [Crossref]

12. Roger V.L., Go A.S., Lloyd-Jones D.M., Benjamin E.J. et al. American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Executive summary: Heart disease and stroke statistics - 2012 update: A report from the American Heart Association. Circulation. 2012; 125(1):188–197. [Crossref]

13. Béjot Y., Delpont B., Giroud M. Rising stroke incidence in young adults: More epidemiological evidence, more questions to be answered. J Am Heart Assoc. 2016; 5(5): e003661. [Crossref]

14. Béjot Y., Daubail B., Jacquin A., Durier J. et al. Trends in the incidence of ischaemic stroke in young adults between 1985 and 2011: The Dijon Stroke Registry. J Neurol Neurosurg Psychiatry. 2014; 85: 509. [Crossref]

15. Păun O., Serbănescu M.S., Badea O., Mogoantă L. Assessment of Stroke Patients Admitted to a Tertiary Emergency County Hospital of Mehedinti - Romania. Curr Health Sci J. 2023; 49(2): 179-185. [Crossref]

16. Athanasios A., Daley I., Patel A., Oyesanmi O. et al. Cerebrovascular Accident and SARS-CoV-19 (COVID-19): A Systematic Review. Eur Neurol. 2021; 84(6): 418-425. [Crossref]

17. Putilina M.V., Vechorko V.I., Grishin D.V., Sidelnikova L.V. Acute cerebrovascular accidents associated with SARS-CoV-2 coronavirus infection (COVID-19). Zh Nevrol Psikhiatr Im S S Korsakova. 2020; 120(12): 109-117. [Crossref]

18. Tsivgoulis G., Palaiodimou L., Zand R., Lioutas V.A. et al. COVID-19 and cerebrovascular diseases: a comprehensive overview. Ther Adv Neurol Disord. 2020; 13: 1756286420978004. [Crossref]

19. Liberman A.L., Lu J., Wang C., Cheng N.T. et al. Factors associated with hospitalization for ischemic stroke and TIA following an emergency department headache visit. Am J Emerg Med. 2021; 46: 503-507. [Crossref]

20. Dubosh N.M., Edlow J.A., Goto T., Camargo C.A. et al. Missed Serious Neurologic Conditions in Emergency Department Patients Discharged With Nonspecific Diagnoses of Headache or Back Pain. Ann Emerg Med. 2019; 74(4): 549-561. [Crossref]

21. Stein M., Hamann G.F., Misselwitz B., Uhl E. et al. In-Hospital Mortality and Complication Rates in Surgically and Conservatively Treated Patients with Spontaneous Intracerebral Hemorrhage in Central Europe: A Population-Based Study. World Neurosurg. 2016; 88: 306-310. [Crossref]

Жедел цереброваскулярлық бұзылулармен байланысты ауруханаға жатқызылған жағдайларды зерттеу

Кастей Р. [1], Турганова М. [2], Ахметжан А.Д. [3], Файзуллина К. [4], Vidmantas Vaičiulis [5]

[1] PhD докторант, Қоғамдық денсаулық сақтау кафедрасы, С.Ж. Асфендияров атындағы Қазақ ұлттық медицина университеті, Алматы, Қазақстан. E-mail: ahiles-18@mail.ru

[2] Ана мен бала денсаулығын қорғау департаментінің медициналық-әлеуметтік оңалту бөлімінің меңгерушісі, Қазақстан Республикасы Денсаулық сақтау министрлігі, Астана, Қазақстан. E-mail: malika_turganova@mail.ru

[3] Денсаулық сақтаудың саясаты мен менеджменті кафедрасының доценті, С.Ж. Асфендияров атындағы Қазақ ұлттық медицина университеті, Алматы, Қазақстан. E-mail: akhmetzhan@rambler.ru

[4] Денсаулық сақтаудың саясаты мен менеджменті кафедрасының доценті, С.Ж. Асфендияров атындағы Қазақ ұлттық медицина университеті, Алматы, Қазақстан. E-mail: kamila.aaa@mail.ru

[5] Қауымдастырылған профессор, қоғамдық денсаулық сақтау факультеті, қоршаған орта және кәсіптік медицина кафедрасы, Литва денсаулық ғылымдары университеті, Каунас, Литва. E-mail: vidmantas.vaiciulis@lsmu.lt

Түйіндеме

Церебральды инсультпен ауыратын науқастарға медициналық көмек көрсету жүйесін дұрыс ұйымдастыру өлімді азайтуға және мүгедектік деңгейін төмендетуге мүмкіндік береді. Барлық іс - шаралар диагностикалық тәсілдердің бірыңғай қағидаттарын құруға және инсультпен ауыратын науқастарды басқаруға бағытталған. Инсультпен ауыратын науқастарға медициналық көмек көрсету жүйесін оңтайландыру арқылы алғашқы профилактикаға маңызды рөл беріледі. Цереброваскулярлық патология және инсульт бойынша үйлестіру орталықтары құрылуда.

Біздің зерттеуіміздің мақсаты 2012-2022 жылдар аралығында Алматы қаласында ми қан айналымы жіті бұзылған пациенттерді емдеуге жатқызу жағдайларын талдау болып табылады.

Әдістері. Ретроспективті зерттеу жүргізілді. Деректерді талдау кезеңі 2012 жылдан 2022 жылға дейін болды. Талдау деректері пациенттердің жасын, төсекте өткізген күндерін, аурудың нәтижесін, шұғыл немесе жоспарлы ауруханаға жатқызуды қамтыды. Деректерді талдау SPSS 13 бағдарламасы арқылы жүргізілді.

Нәтижелер. Жедел цереброваскулярлық бұзылулары бар науқастардың жасы 10 жыл ішінде 59,8 диапазонында өзгерді, ал төсек күндері 11,46 болды. Шұғыл ауруханаға жатқызу жоспарланғанмен салыстырғанда жоғары болды, бірақ соңғы бес жылда бұл оң динамика болды. Сонымен қатар, 2012 жылдан бастап өлім-жітім деңгейі төмендеді, ал қалпына келтіру өсті. Бұл жақсы нәтижелер болып табылады және медициналық мекемелерге қабылдауды білдіреді.

Қорытынды. Инсультті емдеу бағдарламаларын енгізу, сондай - ақ алғашқы медициналық - санитарлық көмекті жақсарту пациенттерге күтім көрсетуді жақсартуға мүмкіндік берді. Алдын алу және емдеу бағдарламалары әлі де жасына, жынысына, қауіп факторларына және басқа факторларға байланысты үнемі жетілдіруді қажет етеді.

Түйін сөздер: ми қан айналымының жіті бұзылуы, инсульт, ауруханаға жатқызу, төсек - күндер, Қазақстан.

Изучение госпитализированных случаев, связанных с острыми нарушениями мозгового кровообращения

Кастей Р. [1], Турганова М. [2], Ахметжан А.Д. [3], Файзуллина К. [4], Vidmantas Vaičiulis [5]

[1] *PhD докторант, кафедра общественного здравоохранения, Казахский Национальный медицинский университет имени С.Д. Асфендиярова, Алматы, Казахстан. E-mail: ahiles-18@mail.ru*

[2] *Руководитель управления медико-социальной реабилитации, Департамент охраны здоровья матери и ребенка, Министерство здравоохранения Республики Казахстан, Астана, Казахстан. E-mail: malika_turganova@mail.ru*

[3] *Доцент кафедры политики и менеджмента в здравоохранении, Казахский Национальный медицинский университет имени С.Д. Асфендиярова, Алматы, Казахстан. E-mail: akhmetzhan@rambler.ru*

[4] *Доцент кафедры политики и менеджмента в здравоохранении, Казахский Национальный медицинский университет имени С.Д. Асфендиярова, Алматы, Казахстан. E-mail: kamila.aaa@mail.ru*

[5] *Ассоциированный профессор, факультет общественного здравоохранения, кафедра экологии и медицины труда, Литовский университет медицинских наук, Каунас, Литва. E-mail: vidmantas.vaiciulis@lsmu.lt*

Резюме

Правильная организация системы оказания медицинской помощи пациентам с церебральным инсультом позволит снизить смертность и снизить уровень инвалидности. Все мероприятия направлены на создание единых принципов диагностических подходов и ведения пациентов с инсультом. Значительная роль отводится первичной профилактике путем оптимизации системы оказания медицинской помощи пациентам, перенесшим инсульт. Создаются координационные центры по цереброваскулярной патологии и инсульту.

Целью нашего исследования является анализ случаев госпитализации пациентов с острыми нарушениями мозгового кровообращения в период с 2012 по 2022 год в городе Алматы.

Методы. Было проведено ретроспективное исследование. Период анализа данных составлял с 2012 по 2022 год. Данные анализа включали возраст пациентов, дни, проведенные в постели, исход заболевания, экстренную или плановую госпитализацию.

Результаты. Возраст пациентов с острыми нарушениями мозгового кровообращения колебался в течение 10 лет в диапазоне 59,8, а количество койко-дней составило 11,46. Количество экстренных госпитализаций было выше по сравнению с запланированными, однако за последние пять лет это была положительная динамика. Кроме того, с 2012 года уровень смертности снизился, в то время как выздоровление увеличилось, что означает лучшие результаты и прием в медицинские учреждения.

Выводы. Внедрение программ по борьбе с инсультом, а также улучшения в первичной медико-санитарной помощи позволили нам улучшить уход за пациентами. В то время как программы профилактики и лечения по-прежнему нуждаются в постоянном совершенствовании с учетом возраста, пола, факторов риска и других факторов.

Ключевые слова: острые нарушения мозгового кровообращения, инсульт, госпитализация, койко-дни, Казахстан.