ОРИГІНАЛЬНІ ДОСЛІДЖЕННЯ
/ORIGINAL RESEARCHES/

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Assessment of compliance with current clinical guidelines on clinical and hardware diagnosis of stroke according to the data of the Vinnytsia register for the period of 2017–2019

Abstract. *Background. Carrying out comparative analysis of representative regional data on the level of diagnosis at the hospital stage of stroke management for a certain period of time and between different medical establishments allows us to form correctly a set of medical and preventive measures and to develop consistent recommendations for their improvement. The purpose: to assess the dynamics of quality indicators of clinical and hardware diagnosis of stroke for the period of 2017–2019 and to conduct a comparative analysis between the studied health care institutions.* **Materials and methods.** *According to the case histories, a comparative analysis was carried out on the level of organization of clinical and hardware diagnosis in the Municipal Non-Profit Enterprise "Academician O.I. Yushchenko Vinnytsia Regional Clinical Psychoneurological Hospital of Vinnytsia Regional Council" (VRCPNH) and Vinnytsia City Clinical Emergency Hospital (VCCEH) in 2017–2019. Statistical processing of the results was performed using Statistica 5.5 package.* **Results.** *Significant differences were found in the number of VRCPNH and VCCEH patients who underwent evaluation of stroke severity on the National Institutes of Health Stroke Scale at hospital stage, neuroimaging in the first hours of the disease, ultrasound of the neck vessels, atrial fibrillation and dysphagia screening, consultations of speech therapist and physiotherapist. In each hospital, there was a positive trend for three years after the completion of all diagnostic measures and procedures.* **Conclusions.** *The results of the study confirmed the adequacy of the studied quality indicators and the feasibility of further implementation of the hospital registry method in other regions of Ukraine to assess and control the quality of care, including the analysis of the effectiveness of new technologies.*
Keywords: *stroke; computed tomography; dysphagia screening; atrial fibrillation; speech therapist; physiotherapist*

Introduction

According to the World Federation of Neurology, more than 15 million strokes are registered annually. Acute cerebral circulatory disorders (ACCD) is a major medical and social problem, they occupy the leading position in the structure of general disability and mortality, both in Ukraine and worldwide [1].

To confirm the presence of stroke, its origin and nature, it is necessary to carefully collect anamnesis, assess the neurological status, general condition of the patient and to ensure timely use of diagnostic examination methods [2]. Given the heterogeneous pathogenesis of stroke, the accuracy and timeliness of diagnosis of its nature is the most important task, since diagnostic manipulations that enter the therapeutic window affect the outcome and prognosis for this pathology [3, 4].

When a patient with a clinical picture of stroke is taken to a medical institution, the primary task of the doctor is to

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assess the severity of the patient's condition with subsequent fixation in the medical record. The use of diagnostic scales (Glasgow Coma Scale, National Institutes of Health Stroke Scale (NIHSS), Orgogozo, etc.) allows you to form an adequate understanding of the condition of a particular patient, helps reasonably determine the strategy of therapy, evaluate the potential risks and benefits of specific treatments in extremely difficult cases [5].

In most specialized hospitals, computed tomography (CT) is initially performed as the gold standard and a faster study that excludes cerebral hemorrhage, tumors, and other diseases. The information obtained from the results of neuroimaging in the first hours of the disease serves a basis for deciding on the feasibility and the indications for continuing the work of the multidisciplinary team for thrombolysis [6].

Ischemic strokes account for up to 80 % of all ACCD [7]. More than half of ischemic strokes are to some extent associated with atherosclerotic lesions of extracranial arteries. With carotid artery stenosis exceeding 70 % of vessel diameter, the annual incidence of ipsilateral stroke is 10–15 % [8]. The use of ultrasound duplex scan of the neck vessels allows us to detect atherosclerotic plaques, to assess their condition and hemodynamic disorders due to their presence. The revealed changes in hemodynamics make it possible to evaluate objectively the level of cerebral ischemic disorders [9]. Therefore, all patients need this study.

Dysphagia is one of the major neurological dysfunctions in ischemic stroke. This disorder is a risk factor for aspiration and pneumonia, increasing disability and mortality after stroke. Currently, dysphagia screening protocols are widely used to identify patients with low risk of aspiration, allowing safe feeding and oral therapy [10]. The effectiveness of screening for dysphagia to reduce the incidence of mortality or aspiration pneumonia has been demonstrated [11].

Stroke and diseases such as atrial fibrillation, diabetes mellitus, myocardial infarction, thrombosis of the lower extremities, systemic diseases of the connective tissue, and others are regarded as interrelated nosologies, because on the one hand, the risk of stroke in patients with these diseases is higher than in the population, and on the other hand, the course of stroke is mostly complicated due to them [12]. Therefore, it is important to conduct screening for the presence of this pathology and to isolate a group of patients in the hospital registry on its basis.

The work of speech therapist as a part of multidisciplinary team is an important component of the entire stroke management measures. Logopedic care begins with the early rehabilitation stage in the intensive care unit or stroke unit where patients with ACCD are admitted. In the most acute and acute period of stroke, speech therapist-defectologist deals with not only neuropsychological problems, but also with severe swallowing disorders, which require special skills and qualified assistance [13].

One of the main consequences of stroke is impaired locomotor activity, problems with motor coordination, muscle hypertonia, etc. Full rehabilitation is not possible without physiotherapy, and in this case, it is a priority. Exact information about a rehabilitation plan involving several techniques can only be provided by a physiotherapist, a rehabilitation specialist during an in-person consultation with each patient [14].

Upon acquisition of the above data, it becomes available to identify certain gaps in the work and to provide guidance on planning interventions to improve the care of stroke patients. The realization of this task is possible only with the creation of hospital and regional registers to assess on their basis the situation with ACCD in a particular hospital and region, and subsequently, in repeated epidemiological studies, — to determine the effectiveness of the preventive and organizational measures [15].

The purpose of the study: to evaluate the dynamics of quality indicators of clinical and hardware diagnosis of stroke for the period of 2017–2019 and to carry out comparative analysis between the studied medical and preventive establishments.

Materials and methods

Medical establishments, which are typical enough for the given region of Ukraine, were selected for maintaining the register. The work is based on the results of a retrospective analysis of case histories of patients, urgently hospitalized to the stroke unit of the Municipal Non-Profit Enterprise "Academician O.I. Yushchenko Vinnytsia Regional Clinical Psychoneurological Hospital of Vinnytsia Regional Council" (VRCPNH) and Vinnytsia City Clinical Emergency Hospital (VCCEH) in 2017–2019 with a diagnosis of acute cerebral circulation disorder (Table 1). The RES-Q report form, a special report forms in the international program developed by the ESO-EAST initiative of the European Stroke Organisation, used by the vast majority of stroke clinics in Europe, was completed on a case-by-case basis at the end. Since 2017, Vinnytsia hospitals surveyed by us are participating in this program. RES-Q (version 1.0) provides information not only on the clinical parameters of a stroke, but also on the timing of individual procedures, which characterizes the work of the institution and serves as an indicator of the quality of work.

The mean age of VRCPNH patients was: in 2017 — 62.40 ± 0.59 years for men and 66.48 ± 0.79 years for women; in 2018 — 60.85 ± 0.59 years for men and 65.54 ± 0.65 years for women; in 2019 — 61.24 ± 0.57 years for men and 64.41 ± 0.84 years for women. The mean age of VCCEH patients was: in 2017 — 67.18 ± 0.60 years for men and 72.53 ± 0.54 years for women; in 2018 — 67.10 ± 0.64 years for men and 72.01 ± 0.59 years for women; in 2019 — 67.66 ± 0.78 years for men and 72.67 ± 0.82 years for women.

In the acute period and in the dynamics of stroke, the NIHSS is used to determine the severity of the disease, for scheduling thrombolysis. The scale allows us to detect the affected vessels, to carry out differential diagnosis; its use is a preparatory stage in predicting disease outcomes and features of the course [16].

Due to the need for neuroimaging in differentiated treatment of acute cerebral circulation disorders [17], the percentage of patients who underwent CT scans was determined.

Table 1. Distribution of patients with acute stroke in the VRCPNH and VCCEH stroke unit in 2017–2019

Health care institution	Sex	2017			2018			10 months of 2019		
		Total	IS	HS	Total	IS	HS	Total	IS	HS
VRCPNH	Male	307	269	37	312	267	45	287	248	39
	Female	209	184	25	187	166	21	175	152	23
VCCEH	Male	351	308	42	310	276	34	182	162	20
	Female	335	296	39	306	282	24	163	153	10

Notes: IS — ischemic stroke; HS — hemorrhagic stroke.

When analyzing the duration of neuroimaging examination, the number of stroke patients is most indicative for assessing the quality of care in the first hours from the moment of admission to the hospital [18].

Given the multidisciplinary nature of the stroke problem [19], the presence of a speech therapist, a physiotherapist during the patient's stay in the hospital, the use of stroke-related procedures and measures (dysphagia screening, atrial fibrillation, ultrasound of the neck vessels) were evaluated.

Bioethics Committee of National Pirogov Memorial Medical University in Vinnytsia (protocol no. 6 dated 23.03.2017) found that the conducted studies did not contradict the basic bioethical standards of the Declaration of Helsinki, the Council of Europe Convention on Human Rights and Biomedicine (1977), the relevant provisions of the World Health Organization and laws of Ukraine.

Statistical processing of the results was performed with the help of Statistica 5.5 package (license number AXXR910A374605FA) using parametric estimation methods.

Results

An analysis of the NIHSS use in general indicates a frequent neglect of these data in VCCEH (in 2017, the procedure was not performed: for 7.1–8.4 % of men, 7.1–9.3 % of women; in 2018: for 7.1–8.0 % of men, 10.1–10.6 % of women; in 2019: for 48.4–48.8 % of men, 58.8–58.9 % of women; $p < 0.01–0.001$) compared to VRCPNH (in 2017, the procedure was not completed: for 0–0.3 % of men; 0–1.4 % of women; in 2018: for 0.3–0.4 % of men, 0 % of women; in 2019: for 0 % of men and women; $p < 0.01–0.001$).

Moreover, if a comparison is made between the years studied, the percentage of patients who underwent this procedure in VRCPNH is fairly high (no difference between 2017, 2018 and 2019) ($p > 0.05$). The situation with the application of this scale for all patient groups in VCCEH in 2018 and 2019 is even worse than in 2017 ($p < 0.05–0.001$), which implies the need to improve organizational arrangements, training and awareness of nursing staff on this issue.

CT diagnosis of stroke was insufficient in VCCEH (survey conducted in 2017: 85.8–95.5 % of men; 84.8–94.9 % of women with ischemic stroke and stroke in general, $p < 0.01–0.001$; in 2018: 79.2 % of women with hemorrhagic stroke, $p < 0.05$; in 2019: 95.1–95.7 % of men with ischemic stroke and stroke in general, $p < 0.05–0.001$) compared to VRCPNH, which had enough objective reasons: staffing problems, the inability to conduct the examination 24/7 for a certain period of time (repair, technical malfunction), refusal of the patient and his relatives from the examination.

Despite the absence of the tomograph directly in VCCEH, the overall percentage of patients examined in this hospital for the period of 2017–2019 increased significantly ($p < 0.05–0.001$). It is worth noting that organization of CT for ischemic strokes was good in VRCPNH over all three years (no difference between 2017, 2018, and 2019; $p > 0.05$), and situation with neuroimaging in hemorrhagic strokes has improved (no survey conducted: 8.1 % of men in 2017, and 0 % of men in 2018 and 2019; $p < 0.05$).

In VRCPNH, the number of patients who underwent neuroimaging during the therapeutic window is significantly higher (procedure performed in 2017: for 83.8–98.9 % of men; 76.0–98.9 % of women; in 2018: for 96.2–95.6 % of men, 93.4–95.6 % of women; in 2019: for 97.4–98.0 % of men, 94.1–100 % of women; $p < 0.001$) compared with VCCEH (procedure performed in 2017: for 15.3–21.4 % of men; 10.3–11.5 % of women; in 2018: for 29.3–38.2 % of men, 34.0–41.7 % of women; in 2019: for 55.0–56.8 % of men, 53.6–80.0 % of women; $p < 0.01–0.001$).

At the same time, positive changes in the percentage of patients examined in the first hours of the disease ($p < 0.05–0.001$) were observed in both medical institutions from 2017 to 2019.

When comparing the two wards, a statistically significant prevalence was found in the number of patients undergoing dysphagia screening in VRCPNH (procedure performed in 2017: 83.1 % of men in total and 89.2 % of men with hemorrhagic stroke; 85.3 % of women with ischemic stroke, $p < 0.05$; in 2018: 97.8–98.5 % of men, 100 % of women; in 2019: 99.7–100 % of men, 98.7–98.9 % of women with ischemic stroke and stroke in general, $p < 0.05–0.001$) compared to VCCEH (procedure performed in 2017: 76.1 % of men in total and 71.4 % of men with hemorrhagic stroke; 77.0 % of women with ischemic stroke, $p < 0.05$; in 2018: 85.3–91.3 % of men, 83.3–89.7 % of women; in 2019: 90.7–91.4 % of men, 92.6–92.8 % of women with ischemic stroke and stroke in general, $p < 0.05–0.001$).

Given the availability of the procedure and the equal ability to screen for dysphagia in the inpatients under study, VCCEH may assume either an inadequate level of orga-

nization of diagnostic measures or a lack of knowledge to identify signs of dysphagia that necessitates training of nursing staff.

For the period of 2017–2019, there is a significant positive trend in each of the two wards regarding dysphagia screening in patients of all groups. So, the number of patients who were not screened decreased in VRCPNH (2017: 8.1–17.8 % of men; 14.1–20.0 % of women, compared to 2018: 0–0.4 % of men; 0 % of women, p < 0.05–0.001, and to 2019: 0 % of men; 0–0.7 % of women, p < 0.05–0.001). A similar situation was observed in VCCEH (2017: 22.1–23.8 % of men; 12.8–23.0 % of women, compared to 2018: 6.9–8.3 % of men; 0–9.9 % of women, p < 0.05–0.001, and to 2019: 5.8–8.6 % of men; 0–6.5 % of women, p < 0.05–0.001).

When comparing the number of patients who were consulted by a speech therapist and a physiotherapist, significant differences were found between the two wards. So, significantly (p < 0.05–0.001) higher number of patients were consulted by these specialists in VRCPNH (2017: 87.9 % of men in general and 87.4 % of men with ischemic stroke; 2018: 99.7 % of men in general, 96.6 % of men with ischemic stroke, 100 % of men with hemorrhagic stroke; women in general and with ischemic stroke — 100 %) compared to VCCEH (2017: 80.1 % of men in general and 80.2 % of men with ischemic stroke; 2018: 90.3 % of men in general, 91.3 % of men with ischemic stroke, 82.4 % of men with hemorrhagic stroke; women in general and with ischemic stroke — 90.3 %).

From 2017 to 2019, the number of patients consulted by a speech therapist and physiotherapist increased significantly in VRCPNH (2017: 87.4–91.9 % of men; 85.9–88.0 % of women compared to 2018: 99.7–100 % of men; 100 % of women, p < 0.05–0.001, and to 2019: 96.8–100 % of men; 96.6–96.9 % of women (except for hemorrhagic stroke), p < 0.05–0.001). VCCEH also showed a significant increase in this indicator (2017: 80.1–80.2 % of men; 80.0–80.1 % of women in total and with ischemic stroke compared to 2018 (similar comparison groups): 90.3–91.3 % of men, 94.4–94.7 % of women, p < 0.05–0.001, and to 2019: 94.4–94.5.0 % of men, 95.1–95.4 % of women, p < 0.05–0.001).

It was found that in VRCPNH, ultrasound of the neck vessels was performed: in 2017, for 66.1–77.5 % of men and 60.3–75.5 % of women; in 2018, for 77.6–90.6 % of men and 70.6–78.9 % of women; in 2019, for 76.7–88.7 % of men and 71.4–82.2 % of women, which is significantly higher (p < 0.05–0.001) compared to VCCEH: in 2017 — 13.4–15.3 % of men and 5.1–5.7 % of women; in 2018 — 5.2–5.8 % of men and 2.0–2.1 % of women; in 2019 — 8.2–9.3 % of men and 8.0–8.5 % of women.

Worse situation with atrial fibrillation screening was noted in VCCEH: 49.2–56.1 % (2017), 54.2–60.9 % (2018), 52.2–58.0 % (2019) of men and 44.5–55.5 % (2017), 41.8–45.0 % (2018), 48.5–51.6 % (2019) of women were not covered (p < 0.05–0.001) compared with VRCPNH: 17.4–19.5 % (2017), 0.3–0.4 % (2018), 1.0–1.2 % (2019) of men and 16.7–19.5 % (2017), 1.1–1.2 % (2018), 0.6–0.7 % (2019) of women. The high number of patients who were not screened for atrial fibrillation at the time of hospitalization justifies the fact that in some of them, data on cardiac arrhythmias had been specified earlier.

During the study period, the proportion of patients not screened for atrial fibrillation (p < 0.05–0.001) decreased significantly in VRCPNH. VCCEH from 2017 to 2019 showed a significant increase in the percentage of patients who had been screened before and at the time of hospitalization (p < 0.05–0.001).

Discussion

The results obtained confirm the current data on the prospects and reliability of the register method, the main conditions of which are the availability of complete information, personalized data and reliability of diagnosis. The method allows us to obtain information about the quality of medical care, morbidity, mortality, etiology and risk factors of stroke in climatic, socio-demographic and economic conditions of individual cities and regions [20].

Considering that significant advances have been achieved in reducing the medical and social consequences of stroke in those countries where reliable epidemiological data have been collected and analyzed during the formation of regional population registers on stroke [21], it becomes relevant to study the regional register in Vinnytsia region.

Due to the lack of representative population epidemiological studies, official statistics do not fully reflect the state of the problem of cerebral stroke in our country. Currently, the creation of registers for the entire territory of Ukraine is limited by the complexity, duration and lack of targeted funding for such studies [22]. In fact, the results of our study can only be compared with those of foreign colleagues.

In specialized neurological clinics of North America, Western Europe, Japan and other developed countries, in cases of suspected stroke, brain CT is performed in the first 1–2 hours, and if necessary — magnetic resonance imaging, perfusion CT, diffusion-weighted magnetic resonance imaging, which can fully confirm or exclude ischemic stroke diagnosis. Unless neuroimaging is performed with suspected ischemic stroke, the diagnosis of ischemic stroke is erroneously established in peripheral vestibular dizziness or, on the contrary, ischemic type stroke is treated as a "hypertensive cerebral crisis" [23].

Thus, in the departments we studied, the situation with neuroimaging was significantly different. In VRCPNH, CT was performed on the day of hospitalization of a patient suspected of having a stroke, usually within 24 hours of its development (2017), and in most cases it was possible to do so within 6 hours of the onset of the disease (2018–2019). This medical establishment has a 24/7 computed tomograph.

In VCCEH, despite the fact that no thrombolysis was performed at the time of the study, the percentage of patients who underwent a CT scan within the therapeutic window indirectly confirms or excludes the hospital's readiness to implement the indicated method of treatment. Unfortunately, during the first hours of hospitalization, the study was conducted only in isolated cases (although the number of patients examined increased from 2017 to 2019), which

clearly limited the scope for any differentiated treatment [24]. A similar situation is observed with the coverage of patients with ultrasound examination of the vessels of the neck, which is also explained by insufficient logistic conditions in this hospital. The analysis of neck ultrasound confirms the need for much greater coverage of patients in both hospitals, especially in VCCEH, where the situation is critical. In 2019, the percentage of patients examined in this hospital is even smaller than in previous years ($p < 0.05-0.001$). Ignoring this method of study makes it impossible to establish a pathogenetic diagnosis of ischemic stroke, and therefore limits the differentiation and secondary prevention of this pathology [25].

Given the unequal availability of ultrasonic Doppler and CT scanner (they are not available in VCCEH), it is possible to explain to some extent the insufficient level of organization of diagnostic measures. However, if we analyze indicators such as dysphagia screening, atrial fibrillation screening, the use of the NIHSS, which does not require diagnostic equipment, it is obvious that they can be improved only if the medical staff are informed of the importance of these procedures and trained in the methods of conducting them. Ignoring these indicators is associated with a high risk of medical complications and increases the risk of sudden death in patients with ACCD [11, 26].

In Ukraine, more than 1.5 million patients have atrial fibrillation. It is known that the presence of atrial fibrillation 5 times increases the risk of developing cardioembolic stroke. Therefore, this type of arrhythmia is a potentially dangerous condition and requires the recording and analysis of its presence in patients with ACCD [27]. It is noteworthy that the percentage of patients who had been diagnosed with atrial fibrillation earlier in the two hospitals was virtually the same. The latter fact indirectly testifies to the poor quality of primary and secondary prevention of arrhythmia in the region as a whole, which has been confirmed in a number of authoritative studies [28].

The modern development of medical science constantly leads to the introduction of rehabilitation technologies in the structure of intensive care of stroke. ACCD rehabilitation in the acute period is a new trend in classical rehabilitation that has evolved over the past 3—5 years. This is possible only with the involvement of speech therapists, neurorehabilitation therapists, physiotherapists as members of the multidisciplinary rehabilitation team [29].

Researchers from different countries compared the level of functional activity of patients in hospitals where early rehabilitation was implemented and where it was not available at all or was performed during a subacute stroke period. At the time of discharge from the first group of hospitals (early rehabilitation), a smaller percentage of patients in need of assistance were identified, including those in nursing homes and hospices [30].

The low number of VCCEH patients consulted by physiotherapists and speech therapists may predict an increased need in third-party caregivers, with poorer functional outcomes at discharge.

Thus, the use of the register method is best suited to solve the above problems, since it provides an opportunity to study a representative (at least for a certain region) group of patients and to generalize (extrapolate) to a much wider range of persons than those included in the register.

Conclusions

The results of the study substantiated the information and adequacy of the studied quality indicators and the feasibility of further implementation of the register method in different regions of Ukraine. Despite the progress made in recent decades in developing new methods for the diagnosis and treatment of strokes, there is a lack of common standards and approaches to patient management. The identified shortcomings can be used in planning the measures to improve the medical care of patients with stroke in the investigated hospitals and allow specific recommendations to be considered with the deviations detected.

Conflicts of interests. Not declared.

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Оцінка дотримання сучасних клінічних рекомендацій щодо клініко-апаратної діагностики інсульту за даними реєстру м. Вінниця за період 2017–2019 рр.

Резюме. *Актуальність.* Проведення порівняльного аналізу репрезентативних регіональних даних стосовно рівня діагностики на госпітальному етапі ведення інсульту за певний період часу і між різними лікувальними закладами дозволяє коректно сформувати комплекс лікувально-профілактичних заходів та розробити послідовні рекомендації щодо їх поліпшення. *Мета дослідження:* оцінити динаміку показників якості клініко-апаратної діагностики інсульту за період 2017—2019 рр. та провести їх порівняльний аналіз між досліджуваними лікувально-профілактичними закладами. *Матеріали та методи.* За даними історій хвороби виконано порівняльний аналіз рівня організації клініко-апаратної діагностики в комунальному некомерційному підприємстві «Вінницька обласна клінічна психоневрологічна лікарня ім. акад. О.І. Ющенка Вінницької обласної ради» (ВОКПНЛ) і Вінницькій міській клінічній лікарні швидкої медичної допомоги (ВМКЛШМД) у 2017—2019 рр. Статистичну обробку результатів здійснено за допомогою статистичного пакета «Statistica 5.5». *Результати.* Встановлено вірогідні відмінності у відсотковій частці пацієнтів ВОКПНЛ і ВМКЛШМД, яким на госпітальному етапі проведено оцінку ступеня тяжкості інсульту за Шкалою інсульту Національних інститутів охорони здоров'я США, нейровізуалізацію в перші години захворювання, ультразвукове дослідження судин шиї, скринінг фібриляції передсердь та дисфагії, консультацію логопеда й фізіотерапевта. У кожному медичному закладі відмічено позитивну динаміку за три роки за фактом проведення всіх діагностичних заходів і процедур. *Висновки. Результати* дослідження підтвердили адекватність вивчених індикаторів якості і доцільності подальшого впровадження методу госпітального реєстру в інших регіонах України для оцінки і контролю якості медичної допомоги, включаючи аналіз ефективності нових технологій.

Ключові слова: інсульт; комп'ютерна томографія; скринінг дисфагії; фібриляція передсердь; логопед; фізіотерапевт

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Оценка соблюдения современных клинических рекомендаций относительно клинико-аппаратной диагностики инсульта по данным регистра г. Винница за период 2017–2019 гг.

Резюме. *Актуальность.* Проведение сравнительного анализа репрезентативных региональных данных по уровню диагностики на госпитальном этапе ведения инсульта за определенный период времени и между различными лечебными учреждениями позволяет корректно сформировать комплекс лечебно-профилактических мероприятий и разработать последовательные рекомендации по их улучшению. *Цель исследования:* оценить динамику показателей качества клинико-аппаратной диагностики инсульта за период 2017—2019 гг. и провести их сравнительный анализ между исследуемыми лечебно-профилактическими учреждениями. *Материалы и методы.* По данным историй болезни выполнен сравнительный анализ уровня организации клинико-аппаратной диагностики в коммунальном некоммерческом предприятии «Винницкая областная клиническая психоневрологическая больница им. акад. А.И. Ющенко Винницкого областного совета» (ВОКПНБ) и Винницкой городской клинической больнице скорой медицинской помощи (ВГКБСМП) в 2017—2019 гг. Статистическая обработка результатов выполнена с помощью статистического пакета «Statistica 5.5». *Результаты.* Установлены достоверные различия в процентной доле пациентов ВОКПНБ и ВГКБСМП, которым на госпитальном этапе проведены оценка степени тяжести инсульта по Шкале инсульта Национальных институтов здравоохранения США, нейровизуализация в первые часы заболевания, ультразвуковое исследование сосудов шеи, скрининг на предмет фибрилляции предсердий и дисфагии, консультация логопеда и физиотерапевта. В каждом медицинском учреждении отмечена положительная динамика за три года по факту проведения всех диагностических мероприятий и процедур. *Выводы.* *Результаты* исследования подтвердили адекватность изученных индикаторов качества и целесообразности дальнейшего внедрения метода госпитального регистра в других регионах Украины для оценки и контроля качества медицинской помощи, включая анализ эффективности новых технологий.

Ключевые слова: инсульт; компьютерная томография; скрининг дисфагии; фибрилляция предсердий; логопед; физиотерапевт