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Nurses' Opinion on Nursing Problems in the Care of Patients after Stroke

Opinia pielęgniarek na temat problemów pielęgnacyjnych w opiece nad pacjentami po udarze mózgu

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Abstract

Introduction. One of the most common causes of death, permanent disability in people aged over 40 is a stroke. The effective rehabilitation of stroke patients is affected by proper nursing care, as well as by assistance, presence and support for families of patients.

Aim. The aim of this study was to obtain nurses' opinion about the problems in the nursing care of patients after stroke.

Material and Methods. The study was conducted with the participation of 60 respondents aged 23–58 years (average age: 38.1) including 4 men and 56 women. The respondents were of practitioners nurses at surgical and conservative wards in a healthcare facility in Silesia. The research tool was a questionnaire completed voluntarily by respondents, ensuring anonymity.

Results. According to 85% of the respondents the most common problems that emerged during the nursing care of patients after stroke consisted of mental disorders occurring in patients. Then, performance of the toilet of the whole body of the patient (21.6%), education of the patients and their families (21.6%) and taking actions against anti-bedsore (18.3%). The fewest problems in nursing care accounted for oral feeding of patients (6.6%) and the situation in which the patient experienced pain (3.3%). Whereas feeding the patient through the tube and participation in pharmacotherapy was not the reason for problems that arise in the care of patients after stroke.

Conclusions. 1) Working conditions of nurses at profile conservative and surgical wards, where hospitalized patients are of III and IV category of care contribute to the formation of significant physical and psychological burdens of this professional group, which reduces efficiency and thus reduces job satisfaction. 2) For the study group, the greatest problems of nursing are patients with mental disorders, education of the patients and their families and the performance of the patient's whole body toilet. They hinder the care of the patient after a stroke. 3) The occurrence of adverse events did not constitute, according to the study group, a problem in patient care, so this perception of the study group points to the emerging syndrome of 'burnout'. This may entail negative consequences in patient's care, who need appropriate and comprehensive care after stroke. (JNNN 2017;6(2):73–80) Key Words: nursing staff, stroke, nursing problems

Streszczenie

Wstęp. Jedną z najczęstszych przyczyn śmierci, trwałego kalectwa i niepełnosprawności u osób powyżej 40 roku życia jest udar mózgu. Na efektywną rehabilitację pacjentów po udarze mózgu niewątpliwie wpływa odpowiednia opieka pielęgniarska, jak również pomoc, obecność i wsparcie rodzin pacjentów.

Cel. Celem badań było pozyskanie opinii pielęgniarek na temat problemów w opiece pielęgnacyjnej nad pacjentami po przebytym udarze mózgu.

Materiał i metody. Badanie zostało przeprowadzone z udziałem 60 osób w wieku 23–58 lat (średnia wieku: 38,1), w tym 4 mężczyzn i 56 kobiet. Respondentami były osoby wykonujące zawód pielęgniarza/pielęgniarki na oddziałach zabiegowych i zachowawczych w placówce służby zdrowia na terenie województwa śląskiego. Narzędziem badawczym był kwestionariusz dobrowolnie wypełniony przez respondentów, zapewniając im anonimowość.

Wyniki. Według 85% respondentów najczęstszymi problemami, jakie powstają podczas sprawowania opieki pielęgniarskiej nad chorymi po przebytym udarze mózgu to obecne u pacjentów zaburzenia psychiczne. Następnie wykonywanie toalety całego ciała pacjenta (21,6%), edukacja pacjenta i jego rodziny (21,6%) oraz podejmowanie działań przeciwodleżynowych (18,3%). Najmniej problemów opiece pielęgniarskiej stanowiło karmienie doustne chorego (6,6%) oraz sytuacja, w której pacjent doświadczał dolegliwości bólowych (3,3%). Natomiast karmienie pacjenta przez zgłębnik i udział w farmakoterapii nie było powodem pojawiających się problemów w sprawowaniu opieki nad pacjentami po udarze mózgu.

Wnioski. 1) Warunki pracy pielęgniarek na oddziałach zachowawczych i chirurgicznych, w których hospitalizowani są pacjenci III i IV kategorii opieki przyczyniają się do powstawania znaczących obciążeń fizycznych i psychicznych tej grupy zawodowej, co zmniejsza skuteczność, a tym samym zmniejsza satysfakcję z pracy. 2) W badanej grupie najwięcej problemów pielęgniarskich dotyczyło pacjentów z zaburzeniami psychicznymi i agresywnymi, edukacja pacjenta i jego rodziny oraz wykonywanie toalety całego ciała pacjenta. Te problemy znacząco utrudnią opiekę nad pacjentami po udarze mózgu. 3) Występowanie zdarzeń niepożądanych nie stanowi według badanej grupy problemu w opiece nad pacjentem, zatem takie postrzeganie badanej grupy wskazuje na pojawiający się syndrom 'wypalenia zawodowego'. Może to nieść za sobą negatywne skutki w opiece nad pacjentami, którym niezbędna jest właściwa i kompleksowa pielęgnacja po przebytym udarze mózgu. (**PNN 2017;6(2):73–80**)

Słowa kluczowe: personel pielęgniarski, udar mózgu, problemy pielęgnacyjne

Introduction

In 2012 stroke was the cause of 6.7 million deaths in the world, while in Poland every year there are an average of 60.000 strokes. In Europe, each year there occur approximately 2.5 million new cases of stroke [1]. Men are much more likely to suffer from a stroke compared to women. It is also one of the most common causes of death and permanent disability in people aged over 40. It is estimated that the number of deaths from stroke in 2030 may reach 7.68 million people being still one of the most serious health problems [2,3]. The World Health Organization defines stroke as "the sudden emergence of central neurological deficit or global dysfunction of the brain that persists longer than 24 hours and does not have a cause other than vascular [2].

Depending on the pathomechanism of vascular disorders, the most common form is ischemic stroke (85% of the stroke), then hemorrhagic stroke (10–15%) and subarachnoid hemorrhage, ranging from 1% to 7% of all stroke cases [4–6].

There are non-modifiable (age \geq 55 years, gender, race — black and yellow, genetic factors) and modifiable (including: smoking, excessive alcohol consumption, obesity, hypertension, diabetes, myocardial disease, dyslipidemias) risk factors predisposing the occurrence of ischemic circulatory disorders in the CNS [7,8].

The most common clinical manifestations of ischemic stroke including:

 disorders of higher nervous activity, which are present in 33% to 50% of cases, mainly speech disorders (aphasia), agraphia, visual agnosia, cortical deafness and "team half-negation" [9],

- disturbances of consciousness present in 25% of patients with various forms: ranging from somnolence to coma,
- paralysis or paresis (pathological reflexes appear amongothers in: Babinski, Rossolimo),
- sensory disturbances, often impaired perception of pain and temperature,
- impairment of vision, manifesting hemianopsia and amblyopia quadrant of singularity,
- impairment of balance or coordination (frequent dizziness, ataxia of the limbs, trunk asynergia),
- vegetative disorders (difficulty in breathing, sleeping, sleep disorders and thermoregulation),
- disorder look and disorders of the sphincter [10].

A patient with suspected stroke requires immediate, specialist medical care. According to the American Heart Association and the European Consensus Group Ad Hoc quick diagnosis of stroke, possibly the fastest hospitalization and taken pharmacologic therapy mainly thrombolytic (rtPA) and early rehabilitation, inclusion of early secondary prevention significantly reduce mortality rate caused by shock incidents [11].

Early mortality from ischemic stroke ranges from 5% to 35% and in the case of hemorrhagic stroke reaches about 60% of deaths and about 63% in the case of the incident of subarachnoid hemorrhage. During the first year after a stroke approximately 30% of patients die, whereas in another 30% is a clear deficit in form of functional paralysis, paresis or aphasia.

Complications due to ischemic stroke in 10% to 15% of cases is visible hemorrhage stroke, further increase in intracranial pressure, thrombo-embolic changes, heart failure and ischemic myocardium. While hydrocephalus, cerebral edema and seizures are the most common symptoms of subarachnoid hemorrhage.

The neurological rehabilitation of a patient after a stroke has been primarily directed at the greatest possible increase in function. During rehabilitation various techniques are used to inhibit pathological motor patterns and to stimulate physiological responses [12].

The greatest neurological improvement occurs in the first 6 weeks, while the functional improvement lasts 2 weeks longer [13].

The absence or late implementation of the rehabilitation of the patient is the reason for the appearance of orthopedic complications: joint contractures, ectopic ossification, and subluxation of the shoulder joint [14].

Nursing care of stroke patients plays a significant role in the perspective of the functioning of the patients during rehabilitation and secondary prevention. The nursing staff take appropriate action in the field of care, to avoid developing complications of a stroke [15].

The most common problems of nursing care for patients after stroke are presented with the care plan in the table below (Table 1).

Table 1. Problems of nursing care	for patients after stroke	[16,17]
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Nursing problems	Care plan
1	2
Risk of early complications in patients with ischemic or hemorrhagic stroke such as: increase in cerebrovascular pressure, cardiovascular disorders, respiratory, water and electrolyte and metabolic management.	 Monitoring of vital signs (blood pressure, heart rate, breathing, body temperature) and state of consciousness and patient's condition. Assessment of dominant neurological symptoms using clinical scales (NIHSS and GCS). Head position of the patient in upright position up to 30° — to prevent intracranial pressure increase. Carrying out a fluid balance. Oxygen administration (usually 2–4 l/min by nasal catheter). Follow the rules of aseptic and antiseptics during invasive procedures to prevent infection.
Risk of pneumonia and lung failure due to immobilisation of the patient.	 Patting the patient's chest to facilitate the removal of tracheal-bronchial secretion. In patients with increased intracranial pressure, chest tightening is not recommended. Frequent change of patient position (every 2–3 hours), early start (without contraindications). Extraction of tracheal-bronchial secretion — in case of emergency. Teaching the patient effective expulsion of respiratory secretions, respiratory gymnastics.
The risk of bed sores and soreness due to immobilisation and difficulty in self-maintenance hygiene.	 Assess the risk of pressure sores on standardized scales (eg. Norton, Waterlow). Skin care, massage of places vulnerable to bed sores. Maintaining clean skin, crotch area. Relieve stressed areas, often changing patient's body position.
Risk of venous thromboembolism (pulmonary embolism, deep vein thrombosis).	 Improve respiratory-circulatory system by early start, breathing exercises and exercise the chest muscles. Lower limb exercise to improve circulation, use of stockings, limb massage towards the heart. Frequent, systematic change of patient position. Elevation of the limb in case of deep venous thrombotic symptoms (limb pain, asymmetric swelling, cyanosis of the foot and lower limb, fever, tachycardia) and making of the altacet. Care for proper hydration of the patient.
Risk of urinary tract infection connected with the presence of urinary catheter and lowering of immunity.	 Follow the rules of aseptic and antiseptics when setting up the urinary catheter. Keep the urethra clear. Proper hydration (2–2.5 l/day). Removing the urinary catheter as quickly as possible.
Risk of aspiration pneumonia due to swallowing disorders, disturbances of consciousness, cough reflex and immobilisation of the patient.	 In order to determine swallowing disorders, one should check that the patient does not show any abnormalities while drinking a small amount of water and that the patient is able to cough on command. Patients with swallowing disorders should be fed with a nasogastric tube or gastrostomy. For oral feeding, the patient should be provided with a sitting or half-sitting position. Place food on the side of the mouth that is not affected by paralysis.

Table 1. Continued

1	2
Possibility of contractures due to increased spasticity and muscular atrophy as a result of lack of motor activity.	 Appropriate patient orientation to counter spasticity using an automated, multiposition bed with antihypertensive mattress. Placing on the healthy side of the body: the upper limb is paralyzed forward with the adductor shoulder, the lower limb in the slight bend in the hip and knee joint, the paralyzed limbs placed on the cushions. Placement on the side of the body affected by paralysis: lying on the affected side of the body is recommended because of cortical stimulation. The shoulder forward causes the weight of the body to be supported by the shoulder blade, which prevents shoulder pressure and allows the upper limb to be dislocated. The lower limb should be located in the intermediate position in the hip and a slight bend in the knee joint, which counteracts spasticity. Regular change in patient's position. Performing passive exercises, taking into account the full range of movements in each joint of the upper and lower ends.
Risk of subluxation in the shoulder joint	 In the period of "flabby limb", the patient's position should be changed very carefully, the shoulders should not be affected by the shoulder/foot injury, but should cover the patient's shoulder and back. Make sure the limb does not hang from the bed or from the trolley. It is important to use the right sling during the "flabby limb".
Difficulty with changing the position of the body in bed due to paralysis/hemiplegia.	 Ensure access to the bed from all sides, the table, cabinet and chair should always be placed on the paralyzed side. Help with changing position: to the healthy side: bend the knee joint of the limb paralyzed, then support the limb paralyzed put forward, take back and rotate the patient to the paralyzed side. On the sick side: stand on the paralyzed side, it is recommended to bend a healthy limb in the knee joint, then move the healthy arm and shoulder over the patients body to each other and make the rotation as above.
Difficulty in walking/moving due to paresis or paralysis.	 Help with getting up: patient's appearance, blood pressure, heart rate are necessary. Adoption of sitting position: patient sitting on a hard chair with a slight forward inclination, the upper limb paralyssis is arranged so that the elbow pressure is transferred to the shoulder and the foot well, not right. Help with learning to walk: a nurse is a function. Instructor and assistant.
Difficulties in self-care due to paresis or paralysis.	 Help with hygiene: oral toilet, full body toilet. Help with hemorrhage haemorrhage in dressing: all activities begin with the weaker side of the body, and when you remove the clothing you should begin with the healthy side of your body.
Difficulties in self-service and movement due to disturbances in higher nerve functions.	 Use of acoustic, visual and tactile stimuli, directing the patient's attention to the "neglected" side. Approaching the patient from the paralyzed side.
Difficulties in food intake due to motor disability and persistent swallowing disorders, which may lead to nutritional deficiencies.	 Have adequate time to talk to the patient when feeding. Provide a safe place for the patient and food handling equipment such as "drinking straws". Urge the patient to chew and chew the food on the weakened side.
Disorders of verbal communication caused by the damage to the central nervous system.	 In patients with motor aphasia: contact with the patient during daily care, patient's listening. In patients with sensory aphasia: using short sentences and simple words, speaking slowly. Enhancing communication by showing the items currently in use. Patients with dysarthria: learning and motivating the patient to perform exercises to strengthen facial muscles and lips. Recognize progress in the process of speech re-education and give approval for this.
Risk of recurrent stroke.	 Discuss the substance of the disease with the patient and his family and risk factors for stroke. Carry out health education on healthy lifestyles, nutrition and physical activity after stroke. Teach the patient and his family the ability to recognize symptoms that may indicate a stroke.
Risks of repeated bleeding (for patients with subarachnoid haemorrhage) and other complications patients treated conservatively (such as cerebral edema, cardiovascular, hydro- electrolyte, metabolic).	 Strictly immobilize the patient for about 4 weeks after bleeding. Monitoring vital life and state of consciousness. Conduction of antituberculous prophylaxis and anticoagulant. Introduce active movements after 4 weeks, after 5 days, and after 6 weeks — get up and walk, provided the course of the disease is not disturbed.

The aim of this study was to obtain nurses' opinion about the problems in the nursing care of patients after stroke.

Material and Methods

The study was conducted with the participation of 60 respondents aged 23–58 years (average age: 38.1) and included 4 men and 56 women. The respondents consisted of practitioners nurses at surgical and conservative wards in a healthcare facility in Silesia: 47 of those surveyed worked in at the neurological ward, 8 respondents worked at sthe urgical ward whereas 5 — at the internal ward. 34 people in the study group had a university education (bachelor degree), 17 of them had secondary education, and only 8 people had a university degree (master degree). 36 people in the study group lived in cities with over 100.000 inhabitants and 24 respondents lived in the countryside.

The test group was subject to the inclusion and exclusion criteria. Criteria for inclusion in the study group consisted of: consent to the test; work in the profession of nurse; shift work. Criteria for exclusion from the study group were the following: no consent for the study; work in a profession other than a nurse; single shift work. The research tool was a questionnaire completed voluntarily by respondents, ensuring anonymity. The questionnaire consisted of 17 questions, two of which were open-ended questions, three questions with the possibility of giving more than one answer, and the remaining questions were questions of single choice. Bioethical committee approval was not required.

Results

The largest group included respondents aged 31–40: 21 (35%), while those over 50 years of age were the least numerous group — 4 persons (6.7%). The largest group consisted of those declaring bachelor's degree — 34 persons (56.7%). Secondary education — 18 people (30%) was another group with a high percentage of respondents. Only 8 respondents (13.3%) had master's degree. Among the respondents, most study group had seniority shorter than 10 years (46.7%). The vast majority of respondents worked two years or longer (60%) with patients who had stroke, 80% performing care of them every day, which is the study of the significant physical strain as well as mental strain (88.3%) (Table 2).

According to 85% of the respondents the most common problems that emerged during the nursing care of patients after stroke are mental disorders present in patients. Next, the performance of the toilet of the

Ta	ble 2	2. C	Characteristics	of t	he	stud	ly	group	
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	20-30 years	31-40 years	41-50 years	Over 50 years
Age of the study group	19 (31.7%)	21 (35.0%)	16 (26.7%)	4 (6.7%)
	Higher education (master)	Higher education (bachelor)	Secondary education	_
Education	8 (13.3%)	34 (56.7%)	18 (30.0%)	_
	Village	City to 20 thousand inhabitants	City of 21 to 100 thousand inhabitants	City above 100 thousand inhabitants
Place of residence	24 (40.0%)	8 (13.3%)	15 (25.0%)	13 (21.7%)
	0–10 years	11-20 years	21-30 years	More than 30 years
Seniority in the profession of nurse	28 (46.7%)	14 (23.3%)	16 (26.7%)	2 (3.3%)
	Several days	Couple months	Year	Two years and longer
Time working with patients after stroke	2 (3.3%)	8 (13.3%)	14 (23.3%)	36 (60.0%)
	Daily	Few times a week	Once a week	_
Frequency of care of patients after stroke	40 (80.0%)	8 (13.3%)	4 (6.7%)	_
	Physical	Mental	Physical and mental	Without a burden
Type of burden in working with patients after stroke	4 (6.7%)	1 (1.7%)	53 (88.3%)	2 (3.3%)
	Falling out of bed	Verbal aggression	Physical aggression	Insulting by the patient's family
Adverse events in work with patients after stroke	33 (55.0%)	32 (53.3%)	30 (50.0%)	20 (33.3%)

whole body of the patient (21.6%), education of patients and their families (21.6%) and carrying out anti-bedsore actions (18.3%). The smallest problems in nursing care accounted for oral feeding of the patient (6.6%) and the situation in which the patient experienced pain (3.3%). Whereas feeding the patient through the tube and participation in pharmacotherapy was not the reason for problems that arise in the care of patients after stroke.

More than half of respondents (60%) assessed their relationship with patients as good and are of the opinion that a good relationship with the patient will help reduce problems in health care. As regards the question of the occurrence of adverse events in the workplace, 90% of respondents confirmed their existence. As many as 55% of respondents admitted that it was the patient falling out of bed, verbal aggression and physical patient (53.3%). 20 respondents had been verbally insulted by the patient's family. For the vast majority of respondents (70%) adverse events are not a problem in health care (Table 3).

Table 3. The most common	problems in nursing care of	of
a patient after a stroke	e according to the study grou	р

Problems in nursing care of a patient after a stroke	Study group (n=60)
Performance of the whole body toilet	13 (21.6%)
Performance of oral toilet	8 (13.3%)
Change of bed linen and personal underwear	9 (15.0%)
Anti-bedsore actions	11 (18.3%)
Oral feeding of the patient	4 (6.6%)
Feeding patient through the tube	0
Application/change of a catheter for women	10 (16.6%)
Feeling pain by the patient	2 (3.3%)
Mental disorders in the patient	51 (85.0%)
Specialist medical equipment service	8 (13.3%)
Participation in the pharmacotherapy	0
Education of patients and their families	13 (21.6%)

Discussion

The obtained data shows that the majority of respondents worked with patients after stroke at least two years and cared for them every day, which is an important indicator for this study because the experience of those who work with patients after stroke allowed for the emergence of significant problems in nursing care.

Patients with mental disorders are the most common cause of problems during the nursing care of patients after stroke. Aggressive behavior of patients who show mental disorders was also a serious problem for a larger group of nurses (59.9%) in the study carried out by Ogińska and Żuralska [18].

Often nurses are afraid of actions that could be taken by the patients with mental disorders, it is also difficult in such cases to maintain good contact with the patient and any attempt to cooperate or carry out health education fails. According to Ciechaniewicz education [19] is understood as "a process of targeted educational influence and teaching, in which teachers should play a role of different professionals. The role of educators can be played by nutritionists, doctors, nurses, midwives, physiotherapists. The most desirable situation in which an individual education program for each patient was developed, taking into account the applicable standards of education". Due to the high burden related to professional duties in the daily work of nurses, there is frequently insufficient time to conduct education among patients and their families. In the studies carried out by Brzeźniak more than half of the respondents indicated that they were over-burdened with work duties, which is an inherent stress factor [20].

Undoubtedly a large number of nurses — 50 respondents (88.3%) felt that working with patients after stroke is both physical and mental burden. Most probably this is due to the fact that that there are too few staff nurses as well as inadequate supply of specialized equipment at neurological wards. In the studies conducted by Kwiatkowska and Pyć which included 31 nurses working at diagnostic wards in over half of the cases (61.29%) they found that they were doing their job until they felt physically and mentally exhausted [21].

More than half of the respondents maintained that they had good relations with patients (60%), and, in turn, 90% of those surveyed believed that maintaining a good relationship with the patient would result in a reduction of problems in health care. Krajewska-Kułak [22] argues that the nurse "must realize that a proper agreement with the patient very often determines the effectiveness of nurse's actions in relation to diagnostic and therapeutic issues". Also, none of the respondents found that their relationships with patients are bad just as in the study conducted by Mickiewicz, where more than half (50.5%) of respondents said that they were good which may mean that health care professionals do not have a difficulty in maintaining good relationships with patients [23]. Research conducted on the group of nurses and patients by Tanay shows that maintaining a relationship between the nurse and the patient significantly affects the satisfaction of nurses and improve the patient's well-being in the disease [24]. The analysis of studies carried out by Zarzycka et al. for at least 30 years have indicated that nurses generally have a fairly high level of empathy, which has a positive effect on the process of communication with patients and their families [25].

As many as 54 respondents (90.0%) admitted that while working with patients after stroke there had occurred adverse events. Environment media increasingly report cases of unhappy patients under the responsibility of health professionals. However, very rarely the media inform about the situations in which the health care worker has been injured by the patient. Despite frequent situations in which there are adverse events, for up to 70% of the respondents they do not constitute a problem in the care of the patient after a stroke. The results indicate the burnout syndrome which is more and more actual in relation to the nursing environment. Tucholska [26] presented the problems of occupational stress and burnout based on the model of developed burnout by Christina Maslach, which takes into account three basic dimensions: emotional exhaustion, depersonalization and decreased satisfaction with the professional achievements.

In the process of depersonalization the employee has objectification of another man, routine, indifference, treating the patient as another case and replace care in supervision. These results show that in the group there appwars the burnout syndrome.

The problems presented in this study referring to the nursing care of stroke patients should be taken into account when planning one's care so that nurses could perform nursing duties in good conditions and that the patient after a stroke could be treated properly, comprehensively and professionally by the nurse.

Conclusions

- 1. Working conditions of nurses at wards of conservative and surgical profile, where hospitalized patients are of III and IV category of care contribute to the formation of significant physical and psychological burdens of this professional group, which reduces efficiency and thus reduces job satisfaction.
- 2. For the study group, the greatest problems of nursing are patients with mental disorders, education of patients and their families as well as the performance of patient's whole body toilet. They hinder the care of the patient after a stroke.
- 3. The occurrence of adverse events did not constitute in the study group a problem in patient's care, so this perception by the study group indicates the emergence of the 'burnout' syndrome. This may entail negative consequences in patient care, which is necessary in appropriate and comprehensive care after the stroke.

Implications for Nursing Practice

Often in the work with the patient the nurse may find the patient aggressive and with mental disorders, it is important not to ignore such situations. One should show the patient empathy, understanding and willingness to help. One must react to every suturing so that one does not experience any undesirable events. However, when an undesirable event occurs, one should report it to the doctor and superior nurse. When nurses overload their responsibilities, they must rationally evaluate what action must be taken first and work with other nurses at the ward.

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