

Quality of life of patients after ischaemic stroke treated in a provincial hospital in Poland.

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OBJECTIVES

Stroke is the third in frequency cause of death after circulatory system diseases and cancer, and the main cause of disability in patients over 45 years of age. During the first six months after stroke, 20% of patients die and the next 20% has significant degree of disability that prevents movement, despite rehabilitation. Experiencing a stroke significantly worsens quality life of patients [1, 2].

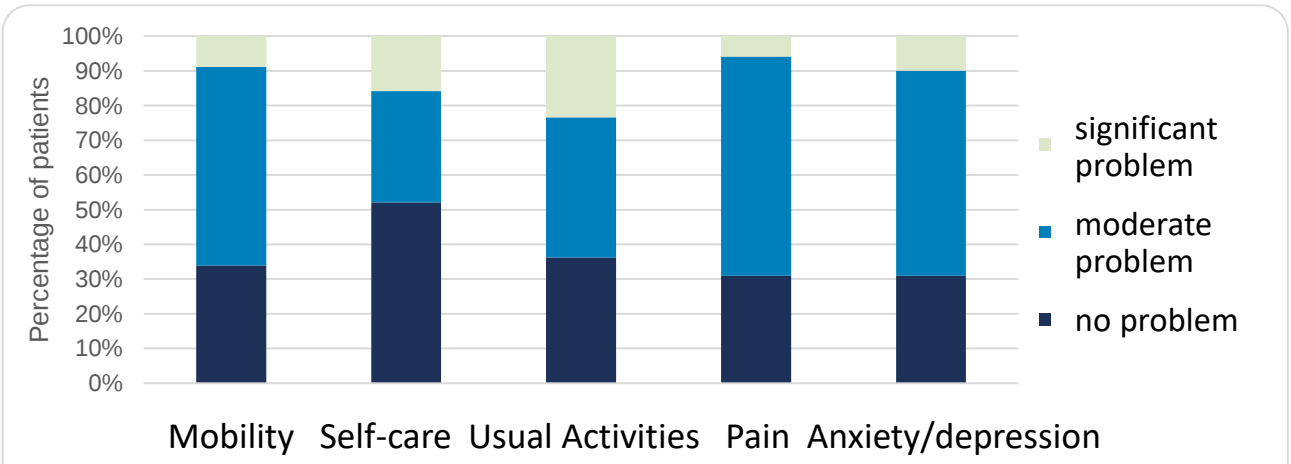
METHODS

Study population: 172 patients discharged from 01.01.2005 to 31.10.2006 from the Regional Hospital in Zakopane, Poland with a diagnosis of IS who consented to the study. We assessed the degree of paralysis, speech disorders, functional status according to the Bartel index (BI), cognitive function using the Mini–Mental State Examination (MMSE) and symptoms of anxiety and depression using the HADS scale at 6 to 12 months after IS. QoL was evaluated using European Quality of Life Scale-5 Dimensions (EQ-5D) and SF-12v2. The SF-12 scale evaluates the quality of life in the mental and physical categories. Each category consists of four subscales, each having a maximum of 50 points. The physical health category (Physical Health Scores - PHS) contains the following subscales: General Health (GH), Physical Functioning (PF), Role Physical (RP), and Body Pain (BP). Mental health category (Mental Heath Scores - MHS) contains 4 subscales: Vitality (VT), Social Functioning (SF), Role Emotional (RE), and Mental Health (MH). The Physical Composite Scale (PCS) and the Mental Health Composite Scale (MCS), are averages of subscales of the corresponding categories.

RESULTS

- All 172 patients who consented to the study were examined, which constituted 76.4% of the patients who survived more than 6 months after the stroke. There were 90 women and 82 men aged from 34 to 95 years (the average age at the time of stroke occurrence was 70.5 years); women were on average 4 years older than men.
- Among the respondents, 40% were 75 years of age or older. During hospitalization, hypertension was diagnosed in 73.8%, atrial fibrillation in 24.4%, and diabetes in 21.5%.
- On discharge from the hospital 70.9% of patients had hemiparesis, 30.8% had aphasia of various degrees, and 8.1% dysarthria. Considerable disability (3 and higher on the Rankin scale) was present in 26.2% of patients. As part of prevention of secondary stroke after discharge, 38 of 42 (90.5%) patients with diagnosed atrial fibrillation were recommended anticoagulant therapy. The remaining 134 patients without atrial fibrillation were recommended antiplatelet treatment, mainly aspirin.
- The examination of patients at 6-18 months after stroke established that 66.3% of them had primary education and 95.9% was retired or perceiving a pension. Twenty-seven (15.7%) patients required 24-hour care. Sixteen (9.3%) patients experienced a subsequent IS during the period from hospitalization to the study, of which 14 (8.1%) was hospitalized as a result of the stroke, and 2 (1.2%) were treated in an outpatient setting.
- A transient ischemic attack (TIA) occurred in 18 (10.5%) of which 14 (8.1%) were treated in a hospital. Hemiparesis persisted in 53.5% of patients, speech disorders in 22.1%. Total return to health from before stroke (100 points on the BI) was found in 33.7% of patients, mild disability (75-95 points) in 46.5%, moderate disability (50-70 points) in 8.1%, severe disability (25-45 points) in 6.4%, and very severe disability (0-20 points), in 5.2% of patients.
- On the basis of the HADS scale, the symptoms of anxiety were present in 39.6%, and of depression in 32.5% patients. Only one patient received pharmacological treatment for depression. Dementia (less than 24 points on the MMSE scale) was found in 62 (38.3%) patients.
- The results of the EQ-5D questionnaire are shown in Figure 1. About two-thirds of patients had some problems with mobility and usual activities, the same amount with pain/discomfort and anxiety/depression, and about a half of the respondents had problems with self-care. However, serious problems in these domains were reported by a smaller percentage of patients. The EQ-5D index calculated based on the UK standard was 0.51 and based on the Polish standard was 0.68.

Figure 1. Results of the EQ-5D survey



- The results of the assessment with the visual-analog scale (EQ- VAS) showed that the patients assessed their current condition most often in the range of numbers from 50 to 70 (average: 54.4). Only a small percentage of patients reported their health in values below 20 (2.9%) or above 80 (1.7%).
- Factors affecting the results of the EQ-5D assessment were as follows:
 - In the univariate analysis, **depression and speech problems were predictors that affected all domains of the questionnaire**. Most domains were also affected by other factors, such as the presence of paresis or subsequent stroke. For example, in the univariate analysis, all dependent variables except education level and previous stroke had an impact on the mobility. Gender did not predict any of the EQ-5D domains.
 - In the multivariate analysis using the multiple regression coefficient, the scores on individual EQ-5D domains were predicted by various factors, such as **the presence of paresis, dementia, depression and anxiety**.
- The results of the SF-12 survey were as follows:
 - The PCS was 34.4 and the MCS was 43.9. In relation to the population standard, lower scores were obtained for the PCS subscales GH, RP and PF. In the PCS category, only 15% of patients were within the adopted norm, and 85% of respondents obtained inferior scores.
 - Slightly better results were obtained in the MCS domain, where 50% of respondents were below the norm, 22% obtained results within the limits, and 28% had scores above the norm.
 - People aged 45-64 years gave the lowest ratings for their physical health and younger patients, aged 35-44 years old, for their mental health. The best mental health scores were obtained from the oldest group of patients, over 75 years old. However, patients' age or gender did not impact the result of the SF-12 survey significantly.
- As in the EQ-5D assessment, the results of individual categories and subscales of SF-12 were influenced by various variables.
 - In the univariate analysis, the PCS was influenced by all analyzed variables apart from education and anxiety, and the MCS was influenced only by some variables, i.e. degree of disability, anxiety, presence of depression and dementia. Interestingly, the relationship between perceived pain (BP) and education level was confirmed in the regression test.
 - In the multi-variate analysis, physical health domains were affected by a subsequent stroke, presence of paresis, speech disorder, anxiety and depression. The mental health components were affected by the degree disability and the presence of anxiety and depression.
- The quality of life in IS survivors is clearly reduced in the majority of domains assessed by the EQ-5D and SF-12 questionnaires. **These findings are consistent with results of many previous researchers** assessing different populations, mainly patients from Western European and North American countries using different scales.

- However, **our results differ in the terms of the mental health component summary MCS**. Our work has shown a score of 43.9 which is reduced compared to the population norm of 53 points. Most researchers obtained a result close to the population standard [3, 4, 5] and others obtained results even above the standard [6]. But only one case of treated depression in our study shows that the role of emotional disorders in healing is underestimated in the study setting.

CONCLUSIONS

- QoL of rural population of IS survivors did not differ substantially from urban population data, except for the reduced total component of mental health.
- The most important factors affecting QoL were the functional state, depression and anxiety.
- Depression was undertreated in the study population.

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