Overview Of Physical Activity And Cerebrovascular Accident (CVA) Incidence at Blambangan Banyuwangi Regional Hospital For The Period April–May 2025

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ABSTRACT

Cerebrovascular Accident (CVA) is the second highest mortality rate after heart disease, with the main cause being physical activity. The recurrence of CVA is influenced by physical activity; independence in carrying out physical activity can prevent recurrence and help restore function. The purpose of this study was to determine the description of physical activity and the incidence of CVA at Blambangan Banyuwangi Regional Hospital from April to May 2025. This research uses descriptive quantitative observational methods with a case series design of 26 respondents using purposive sampling techniques and the International Physical Activity Questionnaire (IPAQ) questionnaire. Data analysis in this study used univariate frequency distribution analysis. The results of this study showed that almost half of the respondents engaged in low physical activity, at 42.3%, and the majority of CVA cases were infarctions, at 73.1%. Factors that influence the incidence of CVA include age, gender, and physical activity. The older the age, the risk of CVA increases, with the most cases occurring in males gender and those who have low physical activity, so that they are at high risk of CVA infarction. Nursing implications as a reference in providing education about CVA risk factors to reduce the incidence of CVA.

Keywords : *CVA, physical activity, CVA incidence*

INTRODUCTION

Cerebrovascular Accident (CVA) is one of the many health problems whose incidence is increasing and is the first cause of disability, and the second cause of mortality after heart disease [1–3]. CVA can occur due to blockage or rupture of cerebral blood vessels due to several factors, including age, gender, heredity, education, occupation, physical activity, smoking, alcohol, and diseases such as hypertension, diabetes mellitus, dyslipidemia, and heart disease [2,3]. The main cause of disease mortality globally is physical activity, low physical activity also has a major impact on disease, one of which is CVA [4]. Recurrence of CVA is influenced by physical activity, independence in carrying out physical activities can prevent recurrence and restore physical and psychological body function[5]

CVA ranks third as a disease that causes disability. The WHO said that there were 13,700,000 new CVA incidents and 5,000,000 deaths per year, and occurred in people over 25 years of age [6,7]. The CVA organization said that 85% of people are at risk of CVA, and it is a disease that causes problems globally [8]. CVA is recorded as the first disease contributing to 19.42% mortality in Indonesia, based on the Institute for Health Metrics and Evaluation (IHME), and its cases have increased by 56.7% from 2013 to 2018 [9]. CVA cases in Indonesia are approximately 2,100,000, with the highest cases in the 55-64 year age range, 33.3% [10].

Several etiologies and factors cause CVA, including factors that cannot be changed such as age and gender, disease factors such as high blood pressure and heart disease, behavioral factors such as lifestyle seen from eating habits, activities and smoking, social and economic factors such as geographical location of residence, level of education and income [11]. According to the American Heart Association in 2013, CVA was caused by disruption of vascularization in the cerebral part, which occurred suddenly in a short time, causing blockage

of cerebral blood vessels called ischemic CVA or rupture of cerebral blood vessels called hemorrhagic CVA [12]. CVA can have physical, psychological, and spiritual impacts, physical impacts are indicated by impaired verbal communication, muscle weakness, hemiparesis, difficulty swallowing, decreased vision, activity intolerance, and death. Psychological impacts include anxiety, stress, depression, denial, and behavioral changes. The next impact is on the spiritual aspect, such as not carrying out obligations according to religious beliefs due to physical limitations and a lack of information on carrying out worship in limited conditions [13,14]

Recurrence of CVA is influenced by physical activity, independence in carrying out physical activities can prevent recurrence and restore physical and psychological body functions [5]. CVA treatment consists of pre-hospital, emergency department, acute hospitalization, post-acute care, and outpatient treatment [15]. Pre-hospital care for patients with CVA can be done in 3 stages, including the detection stage, the patient delivery stage, and the transportation stage, which is important for families with family members suffering from CVA to know if an attack or recurrence occurs [16]. According to the American Heart Association (AHA) / American Stroke Association (ASA) in 2013, CVA requires fast and appropriate management in the first 3 hours after an attack or recurrence, which is called the "Golden Time" [17]. The purpose of this study was to determine the description of physical activity and the incidence of cerebrovascular accidents (CVA) at Blambangan Banyuwangi Regional Hospital in the period April-May 2025.

METHODS

This study uses a descriptive quantitative observational research method that presents the frequency distribution of age and gender with a case series design, specifying cases of patients experiencing CVA at Blambangan Banyuwangi Regional Hospital in April-May 2025, totaling 26 respondents (CMCH, 2022). The sampling technique uses purposive sampling with inclusion criteria for CVA patients who experience a first relapse and exclusion criteria for patients who experience decreased consciousness. This study aims to determine the description of physical activity and the incidence of CVA using the International Physical Activity Questionnaire (IPAQ) for physical activity consisting of physical activity at home, work, and recreation [5]. IPAQ includes 7 questions about physical activity during the last 7 days and has been internationally standardized with a high level of validity (r=0.40) and reliability, namely 0.70-0.87 [19]. Data analysis in this study used univariate frequency distribution analysis.

RESULTS

Frequency distribution of Age and Gender of CVA Patients at Blambangan Banyuwangi Regional Hospital for the period April - May 2025 shows that most are aged 60 - 74 years 15 patients, 57.7%, and are male, 14 respondents, 53.8%.

Table 1. Frequency Distribution of Age and Gender of CVA Patients at Blambangan Banyuwangi Regional Hospital for the Period April – May 2025

Variabel	Frekuensi	Prosentase
Age		
40 – 59 Years	11	42,3%
60 – 74 Years	12	57,7%
Gender		
Male	14	53,8%
Female	12	46,2%

Based on Table 2, the physical activity of CVA patients at Blambangan Banyuwangi Regional Hospital for the period April-May 2025, almost half of them did low physical activity (11 patients or 42.3%).

Table 2. Physical Activity of CVA Patients at Blambangan Banyuwangi Regional Hospital for the Period April – May 2025

Characteristics	Amount	Prosentase
Low	11	42,3%
Medium	8	30,8%
High	7	26,9%

Based on Table 3, CVA incidents at Blambangan Banyuwangi Regional Hospital for the period April - May 2025 showed that the majority experienced CVA infarction, 19 patients (73.1%).

Table 3. CVA incidents at Blambangan Banyuwangi Regional Hospital for the period April – May 2025

Characteristics	Amount	Prosentase
CVA Infark	19	73,1%
CVA Hemoragik	7	26,9%

DISCUSSION

Physical activity and CVA incidents in CVA patients at Blambangan Banyuwangi Regional Hospital in the period April - May 2025, most of whom did low physical activity (42.3%) and CVA infarction (73.1%) can be influenced by the age and gender of patients who were mostly aged 60 - 74 years (57.7%) and male (58.3%). CVA is a decrease in nerve function caused by impaired cerebral blood circulation, blockages called infarction CVA and bleeding called hemorrhagic CVA can occur with unmodifiable risk factors such as age, gender, and genetics, as well as modifiable factors such as being overweight, cholesterol, diabetes mellitus, heart disease, smoking habits, alcohol, and poor physical activity [20]. Research results [5]. Low physical activity can be categorized as physical activity carried out at home without doing heavy activities, and most of the results of the identification of CVA patients mostly do light/low physical activity, 68.3%, occurring in men, 63.41%, aged 55-69 years, 53.65%. Based on research conducted by [16]. The classification of CVA incidents is almost entirely hemorrhagic CVA, 96%, and the majority are men, 52%, who are > 50 years old, 76%.

Physical activity is a form of activity that can improve health and reduce the incidence of cardiovascular disease, one of which is CVA [5]. There is a significant relationship between physical activity and the incidence of CVA, good physical activity can increase blood flow and more stable blood pressure, thereby reducing the risk of hypertension, which is one of the factors that influences CVA attacks and recurrences [21]. Low physical activity affects the accumulation of fat in the body, which can cause arteriosclerosis, which is the main cause of blockage of blood vessels in the brain, so that there is a high risk of CVA infarction. Increased CVA infarction can be caused by the advanced phase of hemorrhagic CVA that has not been handled properly [16,22].

Age and gender factors also affect the incidence of CVA because the older the age, the decline in the function of the body's systems, one of which is blood vessels, the condition of blood vessels in old age will show stiffness and can increase the work of the heart which causes hypertension as one of the triggers for CVA [16]. The influence of gender on the incidence of CVA shows an increase in the male gender seen based on differences in male and female lifestyles associated with smoking and alcohol consumption which are modifiable CVA risk factors, seen from hormone production can also increase the incidence of CVA, namely men do not have the privilege of producing estrogen hormones that can protect blood vessels [23].

CONCLUSION

Cerebrovascular Accident (CVA) is a brain blood vessel disorder that can cause bleeding in the brain called hemorrhagic CVA, and blockage of brain blood vessels called infarction CVA. Factors that influence the occurrence of CVA include age, gender, and physical activity. The older the age, the risk of CVA increases, with the most cases occurring in males gender and those who have low physical activity, so that they are at high risk of CVA infarction. The nursing implications of the results of this study can be used as a reference in providing education about CVA risk factors to reduce the incidence of CVA.

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