

THE IMPACT OF TOXICS CONSUMPTION ON STROKE

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Abstract

The toxic consumption (alcohol, tobacco), in large quantities, is incriminated as being a risk factor in the occurrence of stroke, by determining some metabolic disorders produced by the vasoconstrictor and tachycardia effect and through the action upon the cerebral vessels..

The main objective of this study is to determine the incidence of excessive toxic consumption, (cigarettes, alcohol) in patients who have suffered vascular attack and survived.

We have studied 312 patients hospitalized after stroke for recovery treatment at the Recovery Clinical Hospital Băile Felix, in the period 2011-2013. The study is a statistic one, retrospectively.

A significant percentage (46.15%) of the patients in the study frequently consumed alcohol, during stroke production and 25.32% of them said they were smokers at the time of stroke occurrence.

Key words: risk factors, stroke, alcohol, smoking

INTRODUCTION

Stroke represents a clinical syndrome that occurs following ischemic vascular or hemorrhagic events that determines the damage of the brain substance (Goldstein LB, et al 2010).

Strokes are considered the world's second largest cause of death and medical costs resulting from patient care and indirect costs due to the inability to work, are huge. The average length of hospitalization is 28 days with some variations. One out of four beds is occupied by patients with stroke, predicting the growth of these data, as the population ages. All over the globe it is estimated that stroke requires a rate of 2-4% of the total amount reimbursed by the health care services (Alan.S.Go et al, 2013; Lopez, AD et al, 2001 JM Donnell. Et al, 2010) .

It is considered that each person presents a certain risk for stroke, but studies have incriminated certain factors that increase the risk of this disease (Popescu I. A., 1990).

Risk factors that may cause a stroke can be divided into two categories:

- risk factors that cannot be controlled: age, gender, family history, personal history, race and geographical factors;

- factors that can be controlled: hypertension, diabetes, hypercholesterolemia, heart disease, sedentary lifestyle, obesity, heart rhythm disorders, consumption of toxic substances (Uivarosan D.,2014; Goldstein LB., et al 2010; Kmiman M, 1996).

The toxic consumption (coffee, nicotine) in large quantities is incriminated as a risk factor that causes a number of metabolic disorders by vasoconstrictor and tachycardia effect. Alcohol, after numerous studies has been incriminated as a risk factor by the action on the cerebral vessels which cause capillary endotheliosis and arteriolar hemolysis (MarcutiuV., et al 1989)

The results of some studies on the incidence of stroke in Romania showed that for the age group of up to 40 years, the incidence of stroke is 0.1%, for the age group 40-55 years, the incidence increases to 1.8% and for the age group of 55-70 years, the incidence increases to 4.3% (Cîntează M., et al, 2007).

In developed countries, it is reported a slight decrease in the incidence of stroke, due to the sustained efforts towards prevention.

The objective of this study was to determine the incidence of toxic consumption (cigarettes, alcohol) prior to triggering the disease in patients with stroke.

MATERIAL AND METHOD

We have studied 312 patients hospitalized for post stroke recovery treatment at the Recovery Clinical Hospital Felix and Neurology Hospital Oradea, 2011-2013. The study is a statistic one, retrospective. Data were collected, stored and processed using Microsoft Excel® 2010 (Microsoft Corporation, USA) representing the database of the statistical study in which we followed the incidence of toxic consumption compared with other risk factors for patients with AVC.

The inclusion criteria were:

- ischemic or hemorrhagic stroke;
- informed consent.

To evaluate the toxic consumption, patients completed a questionnaire. Alcohol consumption and smoking status, previous stroke occurrence were evaluated through a set of questions in the questionnaire. Alcohol consumption was assessed based on the frequency of alcohol consumption (daily, every few days, once a week, occasionally). Based on the responses, participants were classified into 3 categories: smokers - those who smoked during the occurrence of the disease, former smokers - those who gave up smoking before, and nonsmokers - those who never smoked.

In this study, former smokers were defined as those who did not smoke in the past 6 months. Data relating to the presence of other controllable risk factors were collected and centralized from the medical records of the patients: stress, obesity, dyslipidemia, diabetes. Patients were divided in two groups: men and women and it was monitored the consumption of toxic and the incidence of the risk factors.

RESULTS AND DISSCUSIONS

Of the 312 patients included in the study, 134 were women and 178 men (Figure 1).

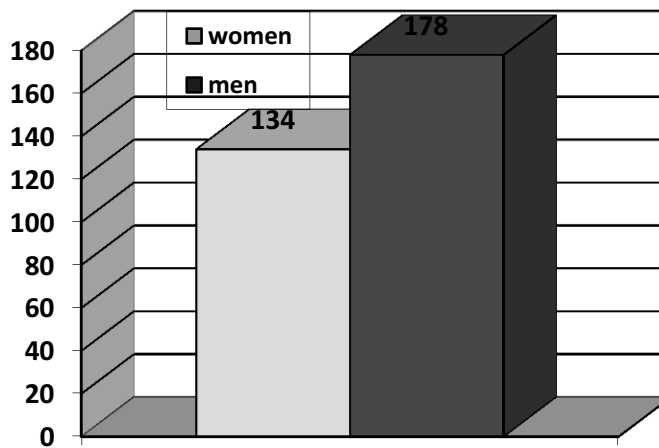


Fig.1. The distribution of patients in the 2 groups

Toxic consumption data are presented in Tables 1 (alcohol) and 2 (smoking).

Table1

The distribution of cases according to alcohol consumption

	Woman (N=134)		Men (n=178)	
	No.	%	No.	%
Daily	22	16,41	34	19,10
Several times a week	25	18,66	63	35,39
Once a week	24	17,91	43	24,16
Occasionally	51	38,06	28	15,73
Never	12	8,96	10	5,62

Daily consumption of alcohol is declared as being 16.41% for women and respectively 19.10% for men. Most men (35.39%) said that they consumed alcohol several times a week and only 5.62% of them have never

consumed alcohol. Of the women group, most (38.06%) said that they had consumed alcohol occasionally and only 8.96% have never consumed alcohol.

There are no significant differences between the two groups with regard to the daily consumption of alcohol.

A significant percentage (46.15%) of the patients in the study consumed alcohol frequently (several times a week) during the vascular accident occurrence.

Table2

The distribution of cases according to smoking

	Woman (n=134)		Men (n=178)	
	Nr.	%	Nr.	%
Smokers	32	23,88	47	26,40
Former smokers	78	58,21	113	63,48
Nonsmokers	24	17,91	18	10,12

In the category of smokers were within 23.88% of women and 26.4% men. The lowest rates in both groups were the non smokers (17.91% female, 10.12% males respectively).

25.32% of all patients included in the study said they were smokers at the time of stroke occurrence.

The distribution of cases according to the incidence of controllable risk factors, including alcohol and smoking is presented in Table 3 and the diagram in Figure 1.

Table2

The distribution of cases according to the incidence of controllable risk factors

Risk factors	Woman (n=134)		Men (n=178)	
	No.	%	No.	%
Alcohol	22	16,41	34	19,10
Smoking	32	23,88	47	26,40
Stress	45	33,58	65	36,51
Obesity	62	46,27	86	48,31
Dyslipidemia	64	47,76	92	51,68
HBP	96	71,64	129	72,47
Diabetes	17	12,69	24	13,48

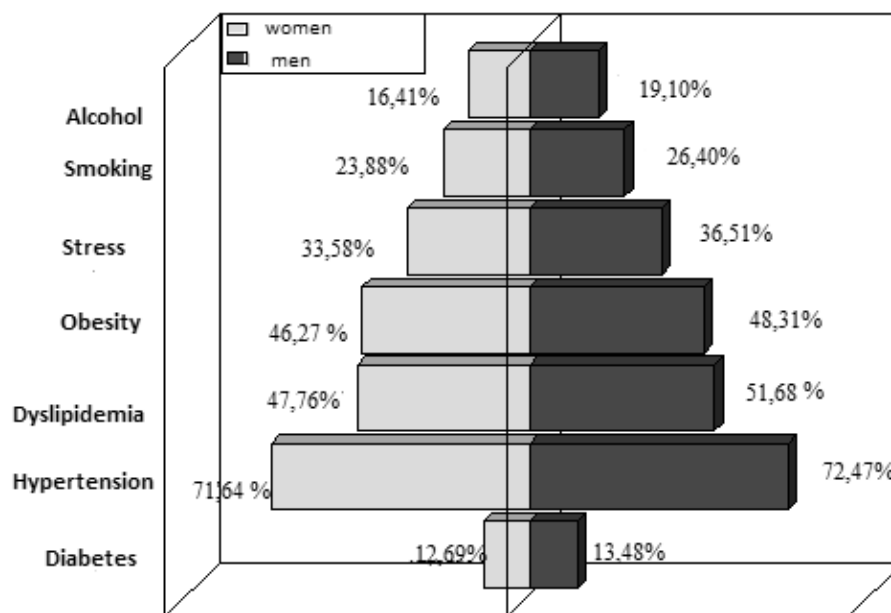


Fig.2 The distribution of cases according to the risk factors

Both in the group of men and in the group of women, the most frequent risk factors were hypertension (71.64% vs. 72.47%), dyslipidemia (47.76% vs 51.68%) and obesity (46.216% vs 48.31%). Daily stress is present in over a third of patients (33.58% vs 36.51%). Daily consumption of alcohol is declared to be 16.41% and respectively 19.10% and smoking 23.88% and respectively 26.40%. Diabetes had a prevalence of 12.69% and respectively 13.48%.

There are no significant differences between the group of women and the group of regarding the incidence of the risk factors ($P = 0.681$).

The obtained results are consistent with the statistical data on the incidence of the risk factors in patients with stroke (Liu XF. Et al, 2005)

CONCLUSIONS

All patients in the study had at least one risk factor for stroke.

Among the risk factors, alcohol consumption and smoking do not occupy the first place as the incidence, but their removal in order to eliminate or reduce the impact of stroke is essential for reducing morbidity and mortality.

A sustained prevention, whose precise target will be the control of the risk factors, represents the key factor that we need to reduce the incidence of stroke, which in Romania is the main cause of mortality.

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