

## Clinical evaluation of patients with non-aneurysmal and non-traumatic subarachnoid hemorrhage

\*<sup>1,2</sup>Maria Dumanscaia, <sup>1,2</sup>Natalia Tibirna, <sup>1,2</sup>Alexandru Dorobet, <sup>2</sup>Olesea Odainic, <sup>1</sup>Elena Manole

<sup>1</sup>Department of Neurology No 1, *Nicolae Testemitanu* State University of Medicine and Pharmacy  
Chisinau, the Republic of Moldova

<sup>2</sup>*Diomid Gherman* Institute of Neurology and Neurosurgery, Chisinau, the Republic of Moldova

\*Corresponding author – Maria Dumanscaia. E-mail: dr.dumanscaia@gmail.com

### Abstract

**Background:** Subarachnoid haemorrhage (SAH) accounts for about 3% of all strokes and 10% of haemorrhagic strokes, with a mortality of up to 50% of cases. In 85% of cases SAH is caused by an aneurysmal rupture, 10% – are non-aneurysmal, non-traumatic, and 5% – is due to other vascular causes. The purpose of the study was the analysis of the clinical course of patients with SAH, which was not determined by rupture of aneurysm or craniocerebral trauma.

**Material and methods:** Patients with non-traumatic and non-aneurysmal SAH hospitalized in the Institute of Neurology and Neurosurgery between 2019 and March 2021 were collected. The diagnosis was confirmed by cerebral CT and CT angiography.

**Results:** The study included 23 patients with non-aneurysmal, non-traumatic SAH with an average age of 59.5 years, 11 women among them. The most common risk factors were: hypertension – 20, smoking – 3, diabetes – 2, obesity – 3, dyslipidemia – 2, COVID-19 – 2, autoimmune diseases – 2. Clinical manifestations included: headache (23), nausea (13), dizziness (11), damage to the cranial nerves (6), motor deficiency (4), meningeal signs (15). Most patients had Hunt-Hess grade 2 (17/23), WFNS grade 1 (16/23), Fisher score grade 1 (13/23), mRs score 2 (17/23). Five patients were placed in the Intensive Care Unit, 5 – developed vasospasm, 2 patients – died.

**Conclusions:** Our study found that non-aneurysmal and non-traumatic SAH developed more frequently in the elderly adults with hypertension, had moderate severity and a moderate-mild post-SAH degree of disability.

**Key words:** subarachnoid hemorrhage, stroke, Hunt-Hess scale.

## Clinical course and outcomes in immunocompromised patients with neuroinfections

\*<sup>1</sup>Elena Manole, <sup>2</sup>Oxana Grosu, <sup>2</sup>Olesea Odainic, <sup>1,2</sup>Mihail Gavriiliuc

<sup>1</sup>Department of Neurology No 1, *Nicolae Testemitanu* State University of Medicine and Pharmacy

<sup>2</sup>*Diomid Gherman* Institute of Neurology and Neurosurgery, Chisinau, the Republic of Moldova

\*Corresponding author – Elena Manole. E-mail: elena.manole@usmf.md

### Abstract

**Background:** Medical conditions that weaken the immune system facilitate the development of the infections of the nervous system and modify its usual clinical pattern. The aim of our study was to analyze the clinical course and outcomes of immunocompromised patients with neuroinfections.

**Material and methods:** A total number of 201 patients (101 (50%) – immunocompromised) with neuroinfections, collected for 11 years (from 2007 till 2018) in a tertiary neurological center were analyzed. The following conditions were considered to be an immunosuppressed state: age > 65 years, use of immunosuppressive drugs, a history of splenectomy, diabetes mellitus, alcoholism, HIV (human immunodeficiency virus) infected patients, malignancy, pregnancy, autoimmune diseases and systemic vasculitis. The SPSS program was used to perform the descriptive analysis.

**Results:** Immunosuppressed patients were older ( $49 \pm 16.5$  vs  $39 \pm 13.6$  years,  $p=0.000$ ), mostly unemployed (65%,  $p<0.05$ ), without any significant gender prevalence (men 57%). Encephalitis was the most prevalent syndrome in immunosuppressed (19% vs 6%,  $p<0.01$ ) and meningitis – in immunocompetent patients (63% vs 49%,  $p<0.05$ ) and had an abrupt onset in 28% of cases. Patients with immunosuppression had higher level of blood glucose (7.2 vs 5.83 mmol/l,  $p<0.001$ ) and erythrocyte sedimentation rate (37 vs 27 mm/h,  $p=0.000$ ). The mortality rate (28% vs 16%,  $p<0.05$ ) and post-disease disability were noticed more frequently (40% vs 23%,  $p<0.01$ ) in immunocompromised patients.

**Conclusions:** Immunosuppression is frequent in patients with neuroinfections, delays diagnosis and leads to a high level of mortality and disability.

**Key words:** neuroinfections, immunosuppression, meningitis.