Could subarachnoid hemorrhage be a rare complication of dysautonomia in Guillain-Barré Syndrome?

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Introduction: The occurrence of spontaneous intracranial hemorrhages (ICH) after Guillain Barré syndrome (GBS) is considered a rare event and is still little studied. Among the pathophysiological mechanisms already analyzed are hemoglobin infiltration triggers acute inflammation, blood pressure lability secondary to dysautonomia, and blood hyperviscosity associated with the use of immunoglobulin. In the literature review, subdural hematoma and ischemic infarcts with hemorrhagic transformation are much more common than aneurysmal subarachnoid hemorrhages (SAH). Interestingly, most cases with aneurysmal SAH were found with dissecting vessels of the posterior circulation. This case report describes an unprecedented case of aneurysmal SAH in a patient with GBS using immunoglobulin and experiencing severe dysautonomia. **Case:** 62-year-old man, emergency department, complaining of progressive asymmetric tetraparesis associated with lower limb dysesthesia that started 5 days ago. On physical examination: asymmetric flaccid areflex tetraparesis with strength grade III. An initial cerebral CT was normal. The cerebrospinal fluid analysis demonstrated cytological protein dissociation (1Cells; 113 Prot), and electroneuromyography demonstrated an acute demyelinating motor sensory pattern. Therefore, a diagnosis of GBS was made, and intravenous human immunoglobulin was recommended. On the second day of hospital admission, the patient developed severe blood pressure and heart rate lability, severe headache, and reduced level of consciousness. A new head CT was performed with evidence of dense subarachnoid hemorrhage in the ambient cistern and posterior interhemispheric cistern with evidence of a dissecting aneurysm of the intracranial left vertebral artery. **Comments:** We found some case reports about GBS preceding and following ICH spontaneously in the literature review. Although dysautonomia is a frequent complication (36%) in demyelinating forms, due to the rare incidence of this complication, it remains uncertain whether this is a pathophysiological link between both diseases.