

iant Posterior Inferior Cerebellar Artery Aneurysm: A Rare Cause of Respiratory failure

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Aneurysms of the posterior inferior cerebellar artery (PICA) are rare. The respiratory and swallowing centers are located in the brain stem near PICA. Because of its location, giant PICA aneurysm is a potential risk factor of respiratory and swallowing disorders. Surgery for these aneurysms is challenging due to the deep location and intimate relation with the medulla and cranial nerves IX, X, and XI. Although endovascular treatment of intracranial aneurysms is increasingly used as an alternative to surgery, giant PICA aneurysms were still challenging lesions, prone to procedural rupture. A 62-year-old female patient visited the department of emergency medicine due to dyspnea and choking sign when swallow. On her medial history, stress induced cardiomyopathy four years ago and intracranial giant aneurysm were remarkable. Transthoracic echocardiography(TTE) was done, but finding was unremarkable. On her Brain MRI, thrombosed PICA giant aneurysm was found, and the size was 29x27x37mm. Compared to previous brain MRI, the size of aneurysm was not changed. From the analysis of arterial blood gas on 10 L/min oxygen inhalation, pH 7.31, PaCO₂ 75.4 mm Hg, PaO₂ 74.3 mm Hg, SaO₂ 93%, and HCO₃⁻ 37.6 mmol/L were obtained. Her mentality was changed to drowsy and intubation was done for mechanical ventilation. Under impression of increased intracranial pressure caused by giant aneurysm, decompressive occipital craniectomy was done. After the surgery her respiratory symptom was improved. After mechanical ventilation care, she transferred to rehabilitation department. She started pulmonary rehabilitation exercise for twice a day for one hour each. Respiratory muscle strengthening and stretching exercise, as well as low intensity aerobic exercise were done under saturation monitoring. After two weeks, she got pulmonary function test and result was normal findings. The Videofluoroscopic Swallowing Study (VFSS) study was done and the findings were mild penetration when liquid swallowing. Respiratory function was recoved but swallowing function still needs rehabilitation. We report a case of a 62-year-old female with giant thrombosed PICA aneurysm as clinical features of respiratory failure and swallowing disorder. We suggest that when these patients address both symptoms of dyspnea and swallowing disorder, not only surgery but pulmonary and swallowing rehabilitation is needed.