

Cerebral Abscess in Adult with Atrial Septal Defect and Pulmonary Stenosis

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Abstract

Background: Atrial Septal Defect (ASD) found in 8-13% of all patient with grown-up congenital heart disease, and 5 % from this group has Pulmonary Stenosis (PS). Cerebral abscess is very rare neurologic complication of ASD that can lead to disability or death.

Case Report: 52 years old female presenting with progressive left-sided weakness since 3 months ago, accompanied with headache, nausea, vomiting and forgetfulness. She remains asymptomatic since birth. Echocardiography showed 18 mm diameter of ostium secundum ASD, with severe valvular PS. Head computed tomography scanning showed large cerebral abscess at parietal lobe of the right hemisphere with perifocal oedema surrounding the abscess which deviates the midline 11 mm to the left brain. Burr-hole craniostomy abscess drainage was performed successfully. Three days after craniostomy, the neurological deficits showed significant improvement. The result of the cerebral abscess culture was *Klebsiella pneumoniae. sp.*

Discussion: Based on the clinical manifestation and imaging findings, we diagnosed this patient as cerebral abscess leading to neurological complication due to untreated ostium secundum ASD with valvular PS. Abscess formation in the brain was possibly caused by bacteremia that circulated to the lungs and brain, also established vulnerable focal zone of the cerebrum due to cyanotic heart disease condition. Burr-hole craniostomy may show promising result.

Conclusion: Cerebral abscess is a very rare neurological complication due to untreated ASD with PS. Burr-hole craniostomy abscess drainage is preferable treatment for this condition and could rapidly show significant clinical improvements.

Keywords: atrial septal defect; pulmonary stenosis; cerebral abscess; brain abscess; neurological complication.