



Case Report

Contrast-induced neurotoxicity presented as transient cortical blindness after stent-assisted coiling of a medium-sized unruptured basilar artery aneurysm: A case report and review of the literature

Toma Spiriev¹, Lili Laleva¹, Nurfet Alioski¹, Raicho Dobrikov², Valeri Gelev³, Milko Milev¹, Vladimir Nakov¹

Departments of ¹Neurosurgery, ²Imaging Diagnostics and ³Cardiology, Acibadem CityClinic University Hospital Tokuda, Sofia, Bulgaria.

E-mail: *Toma Spiriev - spiriev@gmail.com; Lili Laleva - lililaleva@gmail.com; Nurfet Alioski - nalioski@gmail.com; Raicho Dobrikov - rdobrikov@abv.bg; Valeri Gelev - vgelev@abv.bg; Milko Milev - milko.d.milev@gmail.com; Vladimir Nakov - vladimir_nakov@yahoo.com



*Corresponding author:

Toma Spiriev,
Department of Neurosurgery,
Acibadem City Clinic
University Hospital Tokuda,
Sofia, Bulgaria.
spiriev@gmail.com

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ABSTRACT

Background: Contrast-induced neurotoxicity is a rare event after endovascular diagnostic procedures or interventions and presents as transient neurological deficit. Herewith, we present a case of reversible complete cortical blindness after uneventful stent-assisted coiling of a medium-sized unruptured basilar artery aneurysm.

Case Description: A 70-year-old woman with a medium-sized 10 mm/6 mm wide neck basilar tip aneurysm was planned for endovascular obliteration of the lesion. The procedure was done under general anesthesia. The contrast agent was iso-osmolar, nonionic. The aneurysm was coiled, and a stent was placed in the left posterior cerebral artery achieving sufficient aneurysm packing. No signs of vessel obliteration were observed during the procedure. On awakening of anesthesia, the patient reported complete visual loss. Ophthalmological examination was normal. The patient was brought back to the angio-suite but there were no signs of parent vessel compromise from the endovascular implants or distal vessel occlusion. An MRI of the brain was done showing no signs of brain ischemia, just mild brain edema in both occipital lobes. Given the results of the radiological studies and clinical presentation, the diagnosis of contrast-induced neurotoxicity was accepted. In 72 h, the patient had complete resolution of the visual loss and was discharged home with no additional neurological worsening.

Conclusion: Contrast-induced neurotoxicity is a rare event that can occur after uneventful endovascular interventions of the brain vessels. Knowledge of this rare complication, after exclusion of all other possible reversible causes, is important for the treatment and prognosis of the patient.

Keywords: Aneurysm, Contrast-induced neurotoxicity, Endovascular coiling, Endovascular stenting, Reversible neurological deficit

INTRODUCTION

In recent years, the endovascular obliteration of intracranial aneurysms and vascular malformations has greatly advanced the management of cerebrovascular lesions as less invasive alternative to surgery.^[1,2,5,7,12-14,19] Although minimally invasive, endovascular neurosurgery might have complication rates in the treatment of unruptured brain aneurysms ranging from 4.8% to 11%,^[6,13,14] depending on size, morphology, and location of the aneurysm, patient