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Hemispherotomy for drug-resistant epilepsy in an Indonesian population

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Abstract

Hemispherotomy is a surgical treatment indicated in patients with drug-resistant epilepsy due to unilateral hemispheric pathology. Hemispherotomy is less invasive compared with hemispherectomy. We reviewed our experience performing 24 hemispherotomy and report the results of 16 patients with prolonged follow-up of this relatively uncommon procedure in two centers in Indonesia. This is a retrospective observational study conducted from 1999 to July 2019 in two epilepsy neurosurgical centers in Semarang, Indonesia. Surgical techniques included vertical parasagittal hemispherotomy (VPH), peri-insular hemispherotomy (PIH), and modified PIH called the Shimizu approach (SA). The postoperative assessment was carried out using the Engel classification system of seizure outcome. Seizure freedom (Engel class I) outcome was achieved in 10 patients (62.5%), class II in 3 patients (18.7%), class III in 2 patients (12.5%), and class IV in 1 patient (6.3%) with follow-up duration spanning from 24 to 160 months. To the best of our knowledge, this series is the most extensive documentation of hemispherotomy in an Indonesian population.

Keywords: Drug-resistant; Epilepsy; Hemispherotomy.