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Prevalence of Glioblastoma-Not Otherwise Specified (NOS) Based on the Clinical and Histopathology Findings in Main Tertiary Referral Hospital in Bandung, Indonesia

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Abstract : Introduction: Glioblastoma is the deadliest malignant brain tumors in adults. The main challenges in treating glioblastoma are its resistance to the chemo-radiotherapy, poor outcome and low survival rate. The World Health Organization (WHO) 2016 classification identifies two types of glioblastoma by its mutational status of isocitrate dehydrogenase (IDH); since our national insurance experiences budget-limitation, we could not freely apply it in our institutions. We aims to find the prevalence and outcome of glioblastoma-not otherwise specified (NOS) based on its clinical manifestations and histopathology findings. **Methods:** We performed retrograde-analysis based on clinical and histology findings on 48 glioblastoma-NOS patients from 2012-2017. We analyzed its characteristic, primary complains, lesions location, macroscopic findings, therapy and the final outcomes. **Results:** Glioblastoma-NOS is the most common type of gliomas occurs in adults ages 49.29±12.13 years (range 17-72 years). The tumor predominantly involves the frontal lobe (25%) with chronic progressive headache as the chief complaint (90%); 93.8% of the patients underwent tumor removal and received chemo-radiotherapy after surgery based on the histopathology findings. The median survival is 18 months and the prevalence of glioblastoma-NOS in our tertiary referral hospital is 4.72%. **Conclusion:** Hopefully, our study will improve the understanding of the regional differences in glioblastoma-NOS prevalence and pave the way for identifying the regional risk factors that would allow us to improve the protocols on glioblastoma detection, prevention and management. Further studies, incorporating molecular techniques into a patient's tumor analysis for IDH1 mutant or wild type are required for the promise of personalized medicine.

Keywords : Glioblastoma-NOS; Clinical Manifestations; Histopathology Findings.

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