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The Correlation of Ki-67 Labeling Index in Prognostic of Meningiomas

Ade Ricky Harahap[1]*, Rr Suzy Indharty[1]*, Iskandar Japardi[2], Sufitni[1]

[1]Department ofNeurosurgery, Facultyof MedicineUniversity ofNorth Sumatra /RSUP. H. Adam Malik Medan, Indonesia
[2]Department ofPathologyPirngadi Hospital,Medan , Indonesia

Abstract : Meningiomas are benign tumor that have the highest prevalence among primary brain tumor. The incidence in women is approximately twice than in men. Ki-67 associatedwithhistologicalgradeandriskofrecurrentmeningioma.Aims of this study isto know the relationship between the level of cell proliferation was assessed by Ki-67 staining on the prognosis of meningioma.

Materials and methods: Analytic cross sectional research of 63 paraffin-embedded sections of meningiomas were collected.Entireblocksofparaffinmeningiomaspecimensthat had previously beenperformedhematoxylin-eosin stainingbaseandconfirmedasameningiomaperformedimmunohistochemical stainingof Ki-67. Afterstaining, calculatedlabelingindex (LI) ofKi-67 staining.Ki-67 status was also defined into three groups as no proliferation, low proliferation (< 14%), and high proliferation (> 14%).

Results : The number ofmitoticmeasuredbased on the classificationofmeningiomawasfoundthatthe majority ofmeningiomasgrade1hasa weakdegreeofmitosisin the amount of56samples(88.9%). Whilemeningiomasgrade 2has astrongdegreeofmitosisthat is equal to7 samples(11.1%). OutcomesobtainedinpatientswithIHCweakmeningiomashowedbetterresultswhich amounted to48%. Whereas patientswithmeningiomashowedstrongIHCbadoutcomeswhich amounted to15%.Oftheentirespecimensample, only43/63specimensthatexpressonlystainingobserved inmeningiomagradeI.The calculation ofthe relationshipbetweenKi-67 LIstainingwithcomputerizedmeningiomaprognosiswithChi-square statistical test(p <0.05) to obtainp=0.758.

Conclusion: There was nosignificant relationshipbetweenKi-67 stainingLabelingindexwiththe prognostic of patientswith meningioma. This study foundstainingof Ki-67 LIstrongontwentysamplesofmeningiomagradeI.

Key words: Meningioma, Ki-67 antigen, Labelling Index.

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