Fr.OS-1.2 ME Research in Asia Pacific Rim Region and Europe

10:00 – 12:00 (第1会場／Room 1)

Fr.OS-1.2-1
Impact of bifurcation angle and inflow coefficient on rupture risk of bifurcation type basilar artery top aneurysms

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Risk factors for aneurysm rupture have been studied extensively in the past, with several factors showing significant correlations with rupture status. We analysed seventy-one basilar tip aneurysms were included in this study, 22 ruptured and 49 unruptured. Patient data (age and sex), morphometric factors (aneurysm maximum height and volume, aspect ratio, bifurcation angle, bottleneck ratio, and neck-parent artery ratio) and hemodynamic factors (inflow coefficient and wall shear stress) were compared between ruptured and unruptured groups, and statistically analyzed. Aspect ratio, bifurcation angle, bottleneck ratio, and inflow coefficient were significantly correlated with the rupture status on univariate analysis. Logistic regression analysis showed that aspect ratio and bifurcation angle were predictors of rupture. Bifurcation angle correlated inversely with inflow coefficient which in turn correlated directly with wall shear stress on Pearson’s correlation coefficient. Bifurcation angle and aspect ratio were independent predictors for aneurysm rupture.