25. Intraprocedural radiation exposure and procedure time using the woven endobridge versus standard coiling for wide-necked intracranial aneurysms – a single centre retrospective study

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Background: The woven endobridge (WEB) device represents a promising endovascular treatment option for wide-necked bifurcation intracranial aneurysms. Intraprocedural radiation exposure and procedure time using the WEB device compared to other endovascular treatments for wide-necked bifurcation aneurysms has not yet been studied.

Objective: The purpose of this study was to evaluate the impact of endovascular technique – WEB device versus coiling with or without balloon remodelling or stenting – on intraprocedural radiation exposure and procedure time.

Methods: Our institutional endovascular database was consulted for aneurysms treated with the WEB device. Demographic data, aneurysm morphology, intraprocedural dose-area product and fluoroscopy time, procedure time, periprocedural and device-related complications were recorded. These data were then compared to other morphologically similar aneurysms treated with coiling with or without balloon remodelling or stenting during this same timeframe.

Results: Twenty-two patients underwent WEB device placement and 65 patients underwent coiling of morphologically similar aneurysms. There was no significant difference in patient demographics, aneurysm location and size between the two cohorts. Intraprocedural radiation exposure, as measured by average and median DAP and fluoroscopy time, was lower in the WEB compared to the coiling group. Similarly, procedure time was significantly shorter in the WEB group compared to the coiling group. Complication rates were comparable.
Conclusion: This institutional analysis demonstrates shorter procedure times and a trend towards reduced intraprocedural radiation exposure for aneurysms treated with the WEB device compared to those treated via coiling with or without balloon remodelling or stenting.