

Abstract Submitted
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A better understanding of the relevant mechanical parameters in the design of treatment techniques for cerebral aneurysms. GADOR CANTON¹, PALOMA MORA², University of California, San Diego, CHRISTIAN GEINDREAU, 3S, UJF, INPG, CNRS, Grenoble, France, JAVIER RODRIGUEZ-RODRIGUEZ, JUAN C. LASHERAS, University of California, San Diego — We have measured the effect of placing multiple stents across the neck of a 90 °-bend sidewall cerebral aneurysm. A polycarbonate rigid model with a typical shape aneurysm arising from a 4-mm parent artery was used in order to avoid the influence of the deformation produced by the stent in the geometry of the complex parent artery-aneurysm. The characterization of the flow was done using DPIV. We measured both the kinetic energy and the circulation before and after the sequential placement of multiple stents. These measurements, complemented with a finite element method, were used to perform a parametric study to determine the optimum number of stents required to achieve the formation of a stable thrombus inside the aneurysmal sac for each specific geometrical configuration.

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