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Hemodynamic effects of the blood flow on aneurysm rupture risk: Geometrical aspects

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Abstract

This study provides comprehensive information about the impact of the parent vessel's shape on the risk of cerebral aneurysm rupture. It focuses on internal carotid artery (ICA) aneurysms with varying parent vessel sizes, analyzing different aspects of blood flow dynamics. By comparing various hemodynamic factors such as wall shear stress (WSS), oscillatory shear index (OSI) and pressure distribution, the researchers aim to establish a meaningful relationship between the parent vessel's mean diameter and these significant hemodynamic parameters.