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Strategies for Embolization of Brain Arteriovenous Malformations’ Direct Arteriovenous Shunts

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Abstract
Intranidal direct arteriovenous (AV) shunts are non-rarely observed in brain arteriovenous malformations (bAVMs). The endovascular treatment of such direct AV shunts may be challenging. Indeed, there is a significant risk of venous migration of the embolic agent used to occlude the AV shunt, leading to a subsequent risk of nidus bleeding due to impairment (slowdown or even occlusion) of the bAVM’s venous drainage.

Various endovascular techniques have been developed to avoid the risk of such inopportune impairment of the venous drainage during attempts to occlude a direct intranidal AV shunt. We present in this Technical video (Video 1) different endovascular strategies to occlude such direct AV shunts using dual lumen balloons with various liquid embolic agents, or using occlusion plugs.

References

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Frédéric Clarençon: Manuscript redaction, video preparation
Eimad Shotar: Manuscript preparation, critical review of the manuscript
Stéphanie Lenck: Critical review of the manuscript
Mathilde Aubertin: Data collection, critical review of the manuscript
Kevin Premat: Critical review of the manuscript
Anne-Laure Boch: Critical review of the manuscript
Nader-Antoine Sourour: Data collection, Critical review of the manuscript