Cerebrovascular disease treatment

Stents and flow diverters have revolutionized the cerebrovascular disease treatment. Guglielmi Detachable Coils, flexible microcatheters, and first-generation intracranial stents, such as Neuroform (Stryker Neurovascular) and Enterprise stents (Codman/DePuy-Synthes), have paved the way for the development of the Pipeline Embolization Device (PED) (ev3/Covidien/Medtronic) and other endovascular approaches.

Karsy M, etr al. discusses the historical development of flow diverter technologies from the PED to similar devices, such as the Surpass Evolve stent (Stryker Neurovascular), the Flow-Redirection Endoluminal Device (FRED; MicroVention, Inc.), the SILK stent (Balt Extrusion), and the p64 Flow Modulation Device (Phenox). In addition, the potential use of drug-eluting stents and various bioresorbable scaffolds (e.g., poly-L-lactic acid, magnesium), new developments in stent material (e.g., thin-film nitinol), design (e.g., biocompatible polymers, embedded microcircuitry, flow models), and potential applications for flow diverters will be considered. Endovascular treatment of cerebrovascular disease is rapidly advancing via continued development of new technology [1)]

1)
Karsy M, Guan J, Brock AA, Amin A, Park MS. Emerging Technologies in Flow Diverters and Stents for Cerebrovascular Diseases. Curr Neurol Neurosci Rep. 2017 Oct 28;17(12):96. doi: 10.1007/s11910-017-0805-3. PMID: 29081013.