

# Cerebral Bypass for Failed Endovascular Treatment: Simple Illustration of a Long and Complex Surgical Procedure

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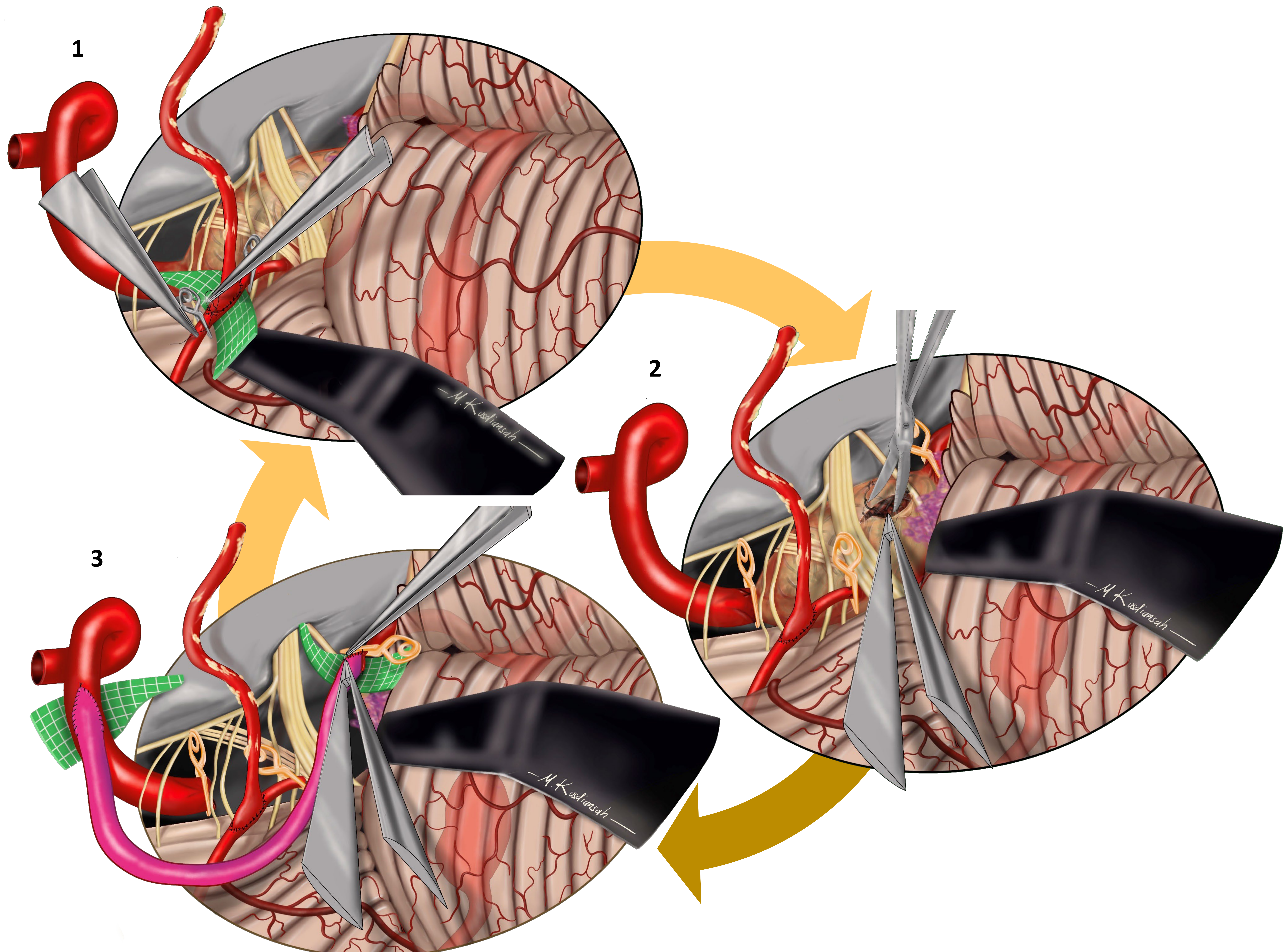
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Three images presented to show cerebral bypass technique for failed endovascular coiling of complex left sided giant intracranial aneurysm. At the time of advancing endovascular technologies, cerebral vascular bypass will become one of the last resorts to treat a failed endovascular treatment for complex aneurysm. The images convey a strong message of the importance of preserving conventional surgical techniques in the era of modern medical technology.

Medical illustration could convey the sequence of the key steps of a complex surgical procedure. By using illustration we can shorten hours of surgical time, show multiple surgical steps and reveal unseen anatomy as an art that goes beyond time and space.



**Figure 1** shows a smaller anastomosis performed with two super bypass forceps using 10-0 suture to connect the occipital artery to the posterior inferior cerebellar artery. A green rubber sheet is used as working base and a black metal retractor was used to hold the cerebellum. **Figure 2** shows that the aneurysm is opened and coil mass is taken out piece by piece using a kamiyama micro scissor and a super bypass forceps. Three golden clips were used to stop the flow into the aneurysm. The retractor is moved for better visualization. **Figure 3** shows that the aneurysm has been resected and a graft (light purple) is used to connect the disrupted vertebral artery. Two super bypass forceps are used for anastomosis and two green rubber sheets are used as working base for both end of anastomosis.