·手术视频·

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局部麻醉下Pipeline置入术治疗颈内动脉海绵窦段巨大未破裂动脉瘤1例

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吕明，首都医科大学附属北京天坛医院神经外科学中心，主任医师，教授，医学博士，博士研究生导师。专门从事神经系统血管病的介入治疗，主攻颅内动脉瘤、蛛网膜下腔出血、脑血管畸形、颈动脉海绵窦瘘、硬脑膜动静脉瘘、脊髓血管畸形、脑动脉狭窄、缺血性脑卒中等各类脑脊髓血管病。目前科研方向致力于颅内动脉瘤介入治疗的规范化和个体化，受国家自然科学基金、北京市科技新星计划、北京市优秀人才项目和北京市卫生系统高层次卫生技术人才培养计划资助。

学术任职：中国研究型医院学会脑血管病专业委员会委员、中国医师协会出血性脑血管病神经介入专业委员会秘书、中国医师协会神经介入专业委员会青年委员会第一届委员会委员。

【摘要】 血流导向装置的出现转变了颅内动脉瘤的治疗理念，可在无弹簧圈的情况下使动脉瘤完全闭塞，这使得局部麻醉下放置血流导向装置成为了可能。本研究报道了一例56岁女性左侧颈内动脉海绵窦段巨大动脉瘤患者，在局部麻醉下成功接受Pipeline血流导向装置植入术。手术过程中，患者保持清醒，未诉明显不适，术后恢复好。该案例证实了局部麻醉下Pipeline置入术的临床可行性，为颅内动脉瘤的介入治疗拓宽了麻醉选择范围。

【关键词】 颅内动脉瘤；Pipeline血流导向装置；局部麻醉

【文章编号】 2095-834X（2024）12-77-02

DOI：10.26939/j.cnki.CN11-9353/R.2024.12.009

本文著录格式：董灵根，吕明. 局部麻醉下Pipeline置入术治疗颈内动脉海绵窦段巨大未破裂动脉瘤1例[J]. 当代介入医学电子杂志，2024，1(12)：77-78.

Pipeline flow diverter implantation under local anesthesia for the treatment of a giant unruptured aneurysm of the cavernous segment of the internal carotid artery: a case report

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【Abstract】 The introduction of flow diversion devices has revolutionized the treatment of intracranial aneurysms by enabling complete occlusion of aneurysms without the use of coils, making it possible to perform flow diverter implantation under local anesthesia. This paper reports a case of a large cavernous segment aneurysm of

收稿日期：2025-11-24

the left internal carotid artery in a 56-year-old female patient, who successfully underwent pipeline flow diverter implantation under local anesthesia. During the procedure, the patient remained awake and reported no significant discomfort, with a good postoperative recovery. This case demonstrates the clinical feasibility of pipeline implantation under local anesthesia and expands the range of anesthetic options for interventional treatment of intracranial aneurysms.

【**Keywords**】 Intracranial aneurysm; Pipeline embolization device; Local anesthesia

Pipeline血流导向装置的问世转变了颅内动脉瘤的治疗理念，对动脉瘤的治疗结果产生了革命性的变化，开启了颅内动脉瘤治疗的新纪元，神经介入医师可在无弹簧圈的情况下使动脉瘤完全闭塞，这使得局部麻醉下放置血流导向装置成为了可能。

本研究报道了一例56岁女性左侧颈内动脉海绵窦段巨大动脉瘤患者，在局部麻醉下成功接受Pipeline血流导向装置植入术。患者4个月前因间断性头痛就诊，经头颅CTA检查确诊为左侧颈内动脉海绵窦段巨大动脉瘤。由于瘤颈较宽，首次尝试微导丝难以越至颈内动脉远端载瘤动脉。将微导管头端重新塑形后，微导管越过瘤颈。释放Pipeline血流导向装置时，通过透视下注射造影剂来定位支架的头端和尾端。术后正位和侧位造影证实支架头端贴壁好。术后患者未诉不适。该案例证实了局部麻醉下Pipeline置入术的临床可行性，为颅内动脉瘤的介入治疗拓宽了麻醉选择范围。

The advent of the pipeline flow diversion device has revolutionized the treatment paradigm for intracranial aneurysms, leading to transformative treatment outcomes and ushering in a new era for intracranial aneurysm therapy. Neurointerventionalists can now achieve complete aneurysm occlusion without the use of coils, making it feasible to implant flow diversion devices under local anesthesia.

This study reports a case of a 56-year-old female with a large cavernous segment aneurysm of the left internal carotid artery, who successfully underwent pipeline flow diversion device implantation under local anesthesia. The patient had presented 4 months prior with intermittent headaches and was diagnosed with a large cavernous segment aneurysm of the left internal carotid artery through cranial computed tomography angiography. Due to the wide aneurysmal neck, the initial attempt to advance the microwire failed to select the distal aneurysm-feeding artery. After reshaping the tip of the microcatheter, it successfully crossed the aneurysmal neck. During pipeline deployment, contrast media was injected under fluoroscopy to precisely locate both the proximal and distal ends of the stent. Postoperative angiograms in both anteroposterior and lateral views confirmed good wall apposition of the stent's proximal end. The patient experienced no significant discomfort postoperatively. This case confirms the clinical feasibility of pipeline implantation under local anesthesia and broadens the anesthetic options for interventional treatment of intracranial aneurysms.

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（本文编辑：马萌萌，许守超）