



## Clinical effects and safety review of self-expanding stent surgery for extracranial carotid artery stenosis treatment

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**ABSTRACT.** This study aimed to investigate the clinical effects and safety review of self-expanding stent surgery in the treatment of extracranial carotid artery stenosis. Seventy-eight patients with carotid artery stenosis were applied with the self-expanding stent for endovascular interventional therapy. Eighty-one stents were implanted into 80 blood vessels of the 78 patients, in which protective umbrellas were used in 56 cases, and the success rate of stent implantation was 100%. The stenosis degree decreased from the preoperative ( $86.72 \pm 9.5\%$ ) to the postoperative ( $13.43 \pm 5.62\%$ ) stage, and the blood peak velocity of the stenosed vessels decreased from  $189.58 \pm 13.5$  to  $83.73 \pm 5.61$  cm/s. Transient blood pressure and heart rate decreases occurred in 21 cases, continuously low blood pressure and heart rate decreasing occurred in 29 cases, and acute occlusion of the ipsilateral middle cerebral artery occurred in 1 case, which was resolved through thrombolysis and thrombus breaking in time. Over-perfusion symptoms were observed in 13 cases, although without serious complications such as cerebral hemorrhage. The follow-up period continued for 6-32 months, and ultrasonography revealed that

77 cases had no stent-restenosis, while 1 case had restenosis. The application of self-expanding stents had good clinical effects, with fewer complications and higher safety for the treatment of extracranial carotid artery stenosis.

**Key words:** Carotid stenosis; Stent; Angioplasty; Angioplasty complication