# Carotid artery Endarterectomy Case Series

A total of 60 patients with Carotid Endarterectomy were randomized into an observation group (30 cases, 2 cases dropped off) and a control group (30 cases, 3 cases dropped off). Both groups were treated with eversion CEA (eCEA). The conventional treatment of internal medicine and antiplatelet drugs i.e. aspirin enteric-coated tablet and clopidogrel hydrogen sulfate tablet were given in the control group for 4 weeks. On the basis of the treatment in the control group, Tongdu Tiaoshen acupuncture was applied at Baihui (GV 20), Fengfu (GV 16), Yamen (GV 15), cervical Jiaji (EX-B 2), Dazhui (GV 14), etc. in the observation group, once a day, 1-day rest was taken after 6-day treatment, 2 weeks were as one course and totally 2 courses were required. The carotid intima-media thickness (IMT) before and after treatment was detected by ultrasonic diagnostic apparatus, the TCM symptom score was compared before and after treatment and in the follow-up of 6 months after treatment, the clinical efficacy was evaluated in the two groups. The occurrence of endpoints within 1 year was recorded.

After treatment, the carotid IMT and TCM symptom scores were decreased compared before treatment in both groups (P<0.05), and the changes in the observation group were greater than the control group (P<0.05). In the follow-up, the TCM symptom scores were decreased compared to before treatment in both groups (P<0.05). The total effective rate was 96.4% (27/28) in the observation group, which was superior to 88.9% (24/27) in the control group (P<0.05). There was 1 case of stroke in the observation group and 2 cases of stroke in the control group within 1-year follow-up, and there was no significant difference in the number of endpoints between the two groups within 1 year (P>0.05).

Tongdu Tiaoshen acupuncture combined with CEA can effectively reduce the IMT in patients with CAS, improve the TCM symptom score, the efficacy is superior to simple CEA treatment [1].

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A study of Kyoto and Kurashiki, aimed to assess the safety, efficacy, and durability of carotid endarterectomy (CEA) for symptomatic low-grade carotid artery stenosis (LGS).

Study participants comprised 61 consecutive patients who underwent CEA for symptomatic carotid artery stenosis. Patients were divided into an LGS group (<50%, n=17) and a non-LGS group (≥50%, n=44). Patient characteristics and short- (within 30 days of CEA) and long-term outcomes were compared between groups for selective usage of internal shunt and the known complications of CEA.

MRI-detected intraplaque hemorrhage was more significant in LGS than in non-LGS (P = .04). For short-term outcomes, no symptomatic infarcts, hyperperfusion syndrome, or acute myocardial infarction (AMI) was confirmed in either group. Internal shunts were used in 4 LGS (23.5%) and 6 non-LGS (13.6%). Asymptomatic diffusion-weighted imaging-positive lesions were confirmed in 2 LGS patients (11.8%) and 5 non-LGS patients (11.4%), neck hematoma in 1 LGS patient, and transient cranial nerve palsy in 1 LGS patient and 2 non-LGS patients, with no significant differences apparent between groups. For long-term outcomes, 5 non-LGS patients showed restenosis (P = .17). Hemorrhagic stroke was not observed in either group. No significant differences were seen for infarct in the ipsilateral carotid territory, any ischemic stroke, AMI, or mortality.

CEA represents a safe and feasible therapeutic option for a subset of patients with symptomatic LGS [2].

An approach to symptomatic carotid artery bifurcation disease was outlined by , with a defined protocol of microsurgical endarterectomy utilizing barbiturate protection during the period of potential focal temporary cerebral ischemia. This protocol includes preoperative antiplatelet therapy, barbiturate anesthesia, the avoidance of an internal shunt, the use of the operating microscope, and strict control of postoperative hypertension. A series of 200 consecutive endarterectomies performed within this protocol in 180 patients and the resultant combined permanent morbidity and mortality rate of 1.5% are reported [3].

1)
Zhang LD, Han W, Gao ZB, Zhu ZH, Wang Y, Zhang GQ, Zhang L, Zhang JY, Luo FC, Tong TT. [Tongdu Tiaoshen acupuncture combined with carotid endarterectomy for carotid artery stenosis: a randomized controlled trial]. Zhongguo Zhen Jiu. 2022 Feb 12;42(2):121-5. Chinese. doi: 10.13703/j.0255-2930.20210202-k0007. PMID: 35152573.
2)
Yoshida K, Fukumitsu R, Kurosaki Y, Nagata M, Tao Y, Suzuki M, Yamamoto Y, Funaki T, Kikuchi T, Ishii A, Miyamoto S. Carotid Endarterectomy for Medical Therapy-resistant Symptomatic Low-grade Stenosis. World Neurosurg. 2018 Dec 3. pii: S1878-8750(18)32767-0. doi: 10.1016/j.wneu.2018.11.208. [Epub ahead of print] PubMed PMID: 30521960.
3)
Spetzler RF, Martin N, Hadley MN, Thompson RA, Wilkinson E, Raudzens PA. Microsurgical endarterectomy under barbiturate protection: a prospective study. J Neurosurg. 1986 Jul;65(1):63-73. PubMed PMID: 3712029.

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