

Others

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Investigation of the Effects of Sex On Shunt Use in Patients Undergoing Carotid Endarterectomy

Abdullah Burak Balci, Hasan Tezcan, Gökhan Güneş, Zeki Temiztürk, Mehmed Yanartaş
Department of Cardiovascular Surgery, İstanbul Başakşehir Çam and Sakura City Hospital, İstanbul, Türkiye

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E-mail: hasan.tezcan44@hotmail.com

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Objective: This study aimed to investigate whether the use of shunts differs between sexes in patients undergoing carotid endarterectomy (CEA) and to reveal the effect of patient sex on postoperative events.

Methods: In this retrospective study, 225 patients (152 males, 73 females) aged 18 years and older who underwent CEA between September 2020 and November 2023 were analyzed. The patients were divided into two groups according to their sex. Patient characteristics were obtained from electronic medical records. Whether the use of shunts differed between the sexes and the outcomes were evaluated.

Results: Intraoperative shunt use was present in 60 (26.7%) patients; this rate was 30.9% in males and 17.8% in females. A statistically significant difference was found between the groups in shunt use ($p=0.037$); however, this difference did not affect perioperative complications.

Conclusion: The results revealed that the use of shunts was significantly higher in males than in females. This may be interpreted as indicative of a more complex or advanced disease in males, or it may reflect a surgical bias or different approaches to managing the perceived risks during CEA. Despite this difference in treatment approach, there was no significant difference in mortality and stroke rates between the sexes, which warrants further investigation of the criteria used for shunt use and its effect on outcomes.

Keywords: Carotid endarterectomy, sex, shunt.

Table 1. Shunt use, radiological findings, and distribution of symptoms by sex				
	Total (n=225)	Female (n=73)	Male (n=152)	p value
Presence of symptoms, n (%)	149 (66.2)	46 (63)	103 (67.8)	0.481#
Degree of stenosis (%) (mean±SD)	83.95±9.99	84.06±9.8	83.89±10.11	0.91*
Use of shunt, n (%)	60 (26.7)	13 (17.8)	47 (30.9)	0.037#

Table 2. Distribution of perioperative complications by gender				
	Total (n=225)	Female (n=73)	Male (n=152)	p value
Postoperative stroke, n (%)	2 (0.9)	0 (0)	2 (1.3)	0.455#
Nerve injury, n (%)	15 (6.7)	2 (2.7)	13 (8.6)	0.083#
Surgical revision, n (%)	13 (5.8)	2 (2.7)	11 (7.2)	0.176#
Hematoma, n (%)	24 (10.7)	6 (8.2)	18 (11.8)	0.41#
Stay in intensive care unit (days), m,(IQR)	1 (0)	1 (0)	1 (0)	0.977+