

Physician - Coronary Artery Diseases and Surgery

[MSB-19]

Effects of Early Coronary Artery Bypass Grafting on Stent and Graft Patency Following Successful Stenting for Acute Coronary Syndromes

Fatih Yamaç¹, Emrah Uğuz^{2,3}, Kemal Eşref Erdoğan^{2,3}, Muhammet Fethi Sağlam^{2,3}, Hüseyin Ünsal Erçelik³

¹Sincan Training and Research Hospital, Ankara, Türkiye

²Ankara Yıldırım Beyazıt University, Ankara, Türkiye

³Ankara Bilkent City Hospital, Ankara, Türkiye

Cardiovascular Surgery and Interventions 2024;11(Suppl 1):MSB-19

Doi: 10.5606/e-cvsi.2024.msb-19

E-mail: fatihyamac17@gmail.com

Received: September 13, 2024 - Accepted: September 29, 2024

Objective: This study aimed to compare graft and stent patency in coronary stent implantation followed by early coronary artery bypass grafting (CABG) in patients with acute coronary syndrome (ACS).

Methods: Seventy-one patients who underwent coronary stenting for ACS followed by early CABG within 30 days were retrospectively evaluated between 2019 and 2022. The patients were divided into two groups: those who received bypass on the stented artery (n=39; mean age: 59.1±10.4 years) and the non-bypass group (n=32; mean age: 62.9±9.5 years).

Results: There was no significant difference in the mean ages of the two groups (p=0.114). The most frequently stented coronary artery was the right coronary artery (71.8%), and the most commonly used stent type was a drug-eluting stent (94%; p=0.414). In both groups, the most preferred dual antiplatelet regimen was acetylsalicylic acid+clopidogrel preoperatively (76.9% in the bypass group, 75% in the non-bypass group) and acetylsalicylic acid+clopidogrel postoperatively (79.5% in the bypass group, 87.5% in the non-bypass group). The mean follow-up time was 775.0±453.1 and 563.4±403.2 days in the non-bypass and bypass groups, respectively. The mortality rate was 7%. Coronary artery imaging was performed in 47 patients. In the non-bypass group, 86% of stents were patent, and 14% were occluded. In the bypass group, 81.8% of stents were patent, and 18.2% were occluded. In the bypass group, 81.8% of grafts were patent, and 18.2% were occluded. There was no significant difference in stent patency rates between the groups.

Conclusion: Continuing dual antiplatelet therapy in patients with patent stents before early CABG could be beneficial for achieving better outcomes. In our study, no significant statistical differences were observed between groups in terms of mortality and postoperative myocardial infarction rates.

Keywords: Coronary artery bypass grafting, coronary artery disease, cpercutaneous coronary intervention, coronary stent endothelialization.

Table 1. Characteristics of research participants

		n Average. ± SD	% Medyan (Min- Max)
Bypass to stented coronary artery*	Non-Bypass	32	45,1
	Bypass	39	54,9
Gender*	Female	8	11,3
	Male	63	88,7
Age (years)**		60,8 ± 10,1	60,0 (41,0 – 83,0)
DM*	-	44	62,0
	+	27	38,0
HL*	-	26	36,6
	+	45	63,4
CKD*	-	66	93,0
	+	5	7,0
EF*	Preoperative	50,3 ± 6,7	50,0 (25,0 – 61,0)
	Postoperative	49,7 ± 7,3	50,0 (30,0 – 65,0)
Preoperative Drug*	Asa + Dmah	54	76,1
	Asa	10	14,1
	Asa + Clopidogrel	5	7,0
	Dmah	2	2,8
Postoperative Drug*	Asa + Clopidogrel	59	83,1
	Asa	6	8,5
	Asa + Ticagrelor	4	5,6
	Asa + Warfmadin	1	1,4
Stented coronary arter*	Rca	49	69,0
	Om	11	15,5
	Cx	8	11,3
	Diagonal	2	2,8
	Rca - Om	1	1,4
Number of stents*	1	52	73,2
	2	19	26,8

*: n / %, **: Avarage ± Standart Deviation / Medyan (Min-Max)

Table 2. Characteristics of the participants

		n Ort. ± SS	% Median (Min-Max)
CTA/CAG*	CTA	40	56,3
	CAG	7	9,9
CTA/CAG Time (day)**		711,3 ± 446,2	690,0 (1,0 – 1.470,0)
CTA/CAG Stent*	Open	39	54,9
	Occluded	8	11,3
CTA/CAG Graft*	Open	14	19,7
	Occluded	5	7,0
Follow-up (day)**		658,8 ± 436,4	600,0 (1,0 – 1.478,0)

*: n / %, **: Average± standard deviation / Median (Min-Max)

References

1. Yay K, Ünal EU, Boysan E, Diken A, Başar V, Durukan AB, et al. Early coronary artery bypass grafting following life-saving percutaneous coronary intervention. *J Clin Anal Med* 2014;5: 15-8. doi: 10.4328/JCAM.1189
2. Grieshaber P, Oswald I, Albert M, Reents W, Zacher M, Roth P, et al. Risk of perioperative coronary stent stenosis or occlusion in patients with previous percutaneous coronary intervention undergoing coronary artery bypass grafting surgery. *Eur J Cardiothorac Surg* 2020;57:1122-9. doi: 10.1093/ejcts/ezaa003.
3. Başgöze S, Şen O, Güner Y, Duman MZMZ, Karacalılar M, Demirel A, et al. The fate of patent stents in patients undergoing coronary artery bypass grafting. *J Updates Cardiovasc Med* 2023;11:60-9. doi:10.32596/ejcm.galenos.2023.2023-01-03.