Dual Antiplatelet Therapy Does Not Increase Postoperative Bleeding Risk Following Elective Total Joint Arthroplasty

Sagar Sham Telang, Ryan Christopher Palmer¹, Arjun Aron², Benjamin M Stronach³, Jeffrey Benjamin Stambough³, Jay R Lieberman², Nathanael D Heckmann

¹Department of Orthopaedic Surgery, ²Keck School of Medicine of USC, ³University of Arkansas For Medical Sciences INTRODUCTION: Dual-antiplatelet therapy (DAPT), the combined administration of aspirin and clopidogrel, is commonly used to prevent thrombus formation in patients at increased risk of thromboembolic complications. However, current guidelines regarding DAPT safety following primary elective total hip arthroplasty (THA) and total knee arthroplasty (TKA) are unclear. This study sought to compare 90-day bleeding and thromboembolic risk among patients receiving aspirin and clopidogrel alone.

METHODS: All patients who underwent primary TKA or THA between 2016-2021 were identified using the Premier Healthcare Database (PHD). Patients who received aspirin and clopidogrel as their only two postoperative thromboprophylaxis agents were compared to patients receiving only clopidogrel for demographic and comorbidity differences. Chi-square analysis was employed to evaluate differences between categorical variables, while independent t-tests were utilized for continuous variables. Univariate and multivariable regression analysis were utilized to assess differences in 90-day outcomes.

RESULTS: In total, 18,117 primary THA and TKA patients (DAPT: 83.0%; clopidogrel: 17.0%) were identified. After adjusting for confounders, DAPT patients did not demonstrate increased risk of bleeding complications, transfusion, acute anemia, hematoma, or hemorrhage compared to those receiving clopidogrel alone. Additionally, there were no significant differences in rates of deep vein thrombosis, pulmonary embolism, myocardial infarction, or mortality between the cohorts. However, compared to patients receiving clopidogrel, those receiving DAPT were at an increased risk of stroke (adjusted odds ratio [aOR] 2.34, 95%-confidence interval [CI]: 1.16-4.69, P=0.017).

DISCUSSION AND CONCLUSION: Despite the notable efficacy of DAPT in reducing thromboembolic risk, patients on DAPT are at no increased risk of postoperative bleeding complications within the early postoperative period following elective THA or TKA. These findings suggest that patients on long-term DAPT can safely continue these medications after THA or TKA.

		Pirvix(978,6-2	Photo+AS		
		Average	5D	Average	SD	p-vah
.1.64	(mano)	71.23	8.73	78.99	8.64	0.165
		Number	Percent	Number	Percent	
	Male	1,541	50.1%	9,821	63.0%	-9.00
Gender	Female	1,535	49.9%	6,820	43.0%	
	Asian	58	1.9%	159	1.1%	-9.90
	Black	237	2.7%	1,854	7.0%	
	Other	161	5.2%	505	3.4%	
	Unknown	32	1.2%	190	1.3%	
Race	Coursian	2,583	84.0%	18,133	87.3%	
	Married	1,692	55.0%	8,673	\$7.7%	0.01
	Single	1,119	36.4%	5,837	13.5%	
Marital	Other	256	8.3%	1,297	8.6%	
Status	Unknown	. 9	0.3%	34	0.2%	
	+100	250	7.5%	1,139	7.6%	0.03
	103-199	621	20.2%	2,777	18.5%	
	203-299	678	22.0%	3,203	21.3%	
	399-299	527	17.1%	2,451	16.5%	
	403-499	333	10.8%	1,770	11.8%	
Bed size	>500	687	22.3%	3,671	24.65	
Urban vs.	Raral	446	14.9%	2,136	14.2%	0.66
Raral	Urban	2,630	85.5%	12,905	85.8%	
Teaching	No	2,850	66.8%	8,626	\$2.3%	<0.00
Status	Yes	1,826	33.4%	6,415	42.7%	
	Midwort	692	22.5%	4,035	35.8%	<0.00
	Northcast	252	8.2%	2,419	16.1%	
	South	1,554	50.5%	7,895	47.2%	
Region	Viet	\$78	18.8%	1.482	0.0%	

			Plate			
		9-3,878)	(N=15		% Difference	p-rates
	я	N		- 14		
Congestive Heart Failure	319	16.37N	1,642	11.52%	0.52%	8.354
Myocardial Infanction	385	INCON	3,819	25.39%	6.34%	-8.001
Valvalar Disease		1.99%	298	1.85%	0.39%	0.112
Conserv Arlory Disease	1,528	964PN	5,851	65.49%	1485	-8.005
Prior Stat	966	31.40%	3,897	18.14%	7.54%	-8.005
Sincking	804	26.14N	1,642	7.86%	-21.08N	-8.005
Thrombophilia	242	24.28N	- 58	9.475	-23.60%	8.863
Henophila	259	8.0%	5	0.875	-6.09%	0.919
Pulmonary Hypericasion	39	6.59%	167	LUS	0.14%	1.511
Chemic Palmonary Disease	140	34.395	2,914	19.725	4.9N	-1.001
Putipharal Vascular Disease	345	11.225	1,774	11.295	0.9%	130
Iboromios	2.412	63.41N	18,345	67.475	2.015	5.628
Complicated Hyperionics	522	18.00%	2,623	13.0%	0.94%	9.20
Contravacular Accident	955	31.40%	3,010	23.89%	-1.45%	-16.001
Hemiplogia Pamplogia	2	6.07%	30	0.22%	0.15%	8.8%
Other neurological disorders	110	3.995	467	3.18%	44%	8.115
Diabetos, uncomplicated	594	IK99N	3,156	29.99%	2,895	мо
Diabetes, complicated	392	12.74N	2,155	14325	1.9%	6.621
Hypothyroidian Renal Failure	330	13.29N	2,212	15.125	3.12%	1.00
	411			0.575	6.345	9.416
Liner Disease	37	1,30%	142	0.94%	4.38%	8,386
Chronic Poptic Ulcer Disease	н	LHN.	43	0.27%	4.17%	9.127
Blood Loss Asonia	в	6425	- 10	0.54%	0.12%	8.415
Deficiency Asemia	55	1.79%	229	1.52%	4.2%	9,280
Cougalopathy	63	2.69N	18	2.14%	0.11%	8.654
Vincus Thromboembolium	144	4485	585	3.38%	-0.85	-16.001
Fluid and Electrolyte Disorders	199	6.185	1,625	6.875	0.54%	8.298
Rhomatic Disease	10	4.19%	664	4.475	4.38N	0.73
HIVADS	1	6.6PN	- 1	0.89%	0.32%	2.639
Lymphone	- 3	6.30%	26	9,175	0.38%	1.341
Obsity	804	20.14%	4,605	27,16%	0.96%	9,213
Weight Loss	4	6.055	29	0.19%	0.36%	8.437
Solid Tamer	15	6.49%	15	0.57%	0.38%	192.6
Metantels Cancer		6.00%	5	0.87%	0.87%	6.312
Alsohel Abuse	17	6.89%	139	0.875	0.89%	3,806
Drsg Abuse	15	605	127	0.84%	0.076	9,861
Psychoso	3	6.095	20	0.145	0.94%	8,529
		14.005	2.142	13.89%	4.72%	8,296

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			Table	3 Elevilo	g Camp	disations						
98-Day Postoperative Outcomes		wis URN		+ASA 5,041)						Hvarishis Ragranico		
	N	56	N	%	CR.	99N-CI	P-Value	JOR	99N-CI	P-Value		
Aggregate Elevelorg Complications	338	BIR.	2,079	19.175	1.000	(8.96, 1.10)	0.299	1.00	(8.81, 3.36)	6.332		
Transferier	13	1376	302	2,87%	1.143	(8.45, 3.09)	0.195	0.98	(0.65, 3.17)	1.429		
Acute America	326	11.18%	2,763	18,37%	1.011	(8.48, 1.21)	0.0%	147	(8.86, 3.30)	0.21		
Firmtona	12	0.39%	97	0.005	8.971	(8.52, 3.80	6.927	0.95	0.90.	6.03		
Flemenhage	10	0.33%	40	0.27%	1.518	(848, 348)	0.368	0.76	(8.38, 1.54)	140		

VALE "Interview & California NULL Nature Nature Nature Nature Nature <th colspan="11">Table 4: Thrombounholic Complications</th>					Table 4: Thrombounholic Complications										
otoperative					Université Represión Multivariaie Repres				produe						
	N	- %	N	%	OR	99N-CI	P-Value	+04	99%-CI	P-Value					
	28	6915	129	0.86%	0.94		0.774	0.99	(3.66, 1.45)	0.947					
	13	6495		0.37%	4.76		6.332	0.79	(8.44, 1.40)	0.436					
40	19	633%	101	0.67%	2.87		6.038	2.34	0.16,4495	0.817					
	29	643%	113	0.34%	1.0		6.579	1.44	(3.64, 1.67)	0.880					
	159	438%	713	4.77%	1.80		6.952	0.58	0.81, 1.175	0.790					
and as	,	6.27%		0.17%	4.11	(8.32,	0.148	4.00	0.15.149	0.247					

Table 5: Medical and Other Complications												
56-Day Postoporative Outcomes	Fireis (N=3,036)		Plavis+ASA (N=15,041)		University Repression			Multivariate Represion				
	N	N	N	55	N	76	08.	95%-CI	P-Yalee	108	99%-CI	P-Value
cute Renal Pailare	148	4.87%	705	40%	6.97	(9.81. 1.17)	0.367	0.99	(8.79, 115)	0.814		
menoreia	33	1.0%	145	1.97%	6:99	10.62.	9.602	0.94	(8.64, 1.59)	0.752		
cute Rospinstory allure	51	1.955	347	1.64N	6.99	10.73, 1.34)	0.550	115	(8.83, 1.57)	0.412		
rinary Tract doction	50	2,97%	317	2,37%	6.81	19.64, 1.010	9,412	0.93	(8.75, 114)	0.33		
riproshetic Joint doction	27	0.88%	105	LON	0.75	10.5 L 1.189	0.349	0.78	(0.51, 1.20)	0.25		
ng Poetsponstive doction	22	0.72%	-	1.9%	6.83	19.52. 1.32)	0.425	0.84	(8.52, 1.55)	0.679		
rpeio	25	0.82%	107	A71N	6.87	10.96.	0.947	0.90	(8.58, 1.41)	0.871		
cund Dehisomor	32	LHS	119	1.79%	0.75	10.51. 1.12)	9.167	0.78	(8.52, 114)	0.217		