CAPTAIN : Cessation vs no cessation of Acetylsalicylic acid Preoperatively in laparoscopic Totally extraperitoneal inguinal hernia repair (an RCT)

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INTRODUCTION & AIM

•The incidence of inguinal hernia is increasing in view of the ageing population worldwide. Cardiovascular and cerebrovascular co-morbidities are the commonest indications for use of antiplatelet agents (including acetylsalicylic acid) in this age group. There are no guidelines with regards to perioperative acetylsalicylic acid cessation.
•The CAPTAIN trial aimed to investigate the safety and provide recommendations on continuing acetylsalicylic acid preoperatively in patients undergoing elective laparoscopic inguinal hernia mesh repair (LIHR).

METHODS

•Prospective, multicentre RCT
• Duration: April 2016 to June 2024
• Study population: 100 patients undergoing laparoscopic TEP (Total Extra-Peritoneal) inguinal hernia repair under general anaesthesia
• Patients who are unfit for general anaesthesia, have obstructed / strangulated hernias will be excluded from this study.
• Randomized into 2 groups by coin toss method: preoperative aspirin cessation and no preoperative aspirin cessation
• Standardised surgical lap TEP technique, performed by principal surgeons of the study
• Follow-up up to 6months (1 week, 2 weeks, 1 month, 3 months post op)
• Data collected on 2o outcomes: bleeding, thromboembolic complications, wound infections, hematoma/seroma formation, length of hospital stay and recurrence

Patient Demographic Variables

			Preoperative acetylsalicylic acid continued (N=45)	Preoperative acetylsalicylic acid cessation (N= 50)	P value
Mean age in years (SD)			66.7 (10.4)	70.2 (8.4)	0.072
Bone Mass Index (SD)			23.8 (3.5)	24.1 (4.9)	0.692
Gender	Female		2 (4.5%)	0 (0%)	0.134
	Male		43 (95.5%)	50 (100%)	
ASA score	I		0 (0%)	0 (0%)	0.068
	II		32 (71.1%)	28 (56%)	
	III		13 (28.9%)	21 (42%)	
	IV		0 (0%)	1 (2%)	
Etiology of inguinal hernia	Primary		40 (88.9%)	46 (92%)	0.609
	Recurrent		5 (11.1%)	4 (8%)	
Type of inguinal hernia	Unilateral	Left	9 (20%)	6 (12%)	0.606
		Right	2 (4.5%)	4 (8%)	
	Bilateral		34 (75.5%)	40 (80%)	

Comparison of Operative Findings

		Preoperative acetylsalicylic acid continued (N=45)	Preoperative acetylsalicylic acid cessation (N= 50)	P value
Length of hospital stay in days (SD)		0.7 (0.6)	0.8 (0.6)	0.378
Postoperative DVT/ PE	Yes	0 (0%)	0 (0%)	NA
	No	45 (100%)	50 (100%)	
Postoperative stroke	Yes	0 (0%)	0 (0%)	NA
	No	45 (100%)	50 (100%)	
Postoperative seroma	Yes	13 (28.9%)	13 (26%)	0.755
	No	32 (71.1%)	37 (74%)	
Postoperative hematoma	Yes	15 (33.4%)	9 (18%)	0.020
	No	30 (66.6%)	41 (82%)	
Postoperative hernia recurrence in 30 days	Yes	0 (0%)	0 (0%)	NA
	No	45 (100%)	50 (100%)	
Postoperative chronic pain in 30 days	Yes	1 (2.2%)	1 (2%)	0.940
	No	44 (97.8%)	49 (98%)	
Postoperative readmission within 30 days	Yes	0 (0%)	0 (0%)	NA
	No	45 (100%)	50 (100%)	
Length of follow-up in days (SD)		94.2 (89.4)	93.8 (76.7)	0.980

Comparison of Outcome Variables

		Preoperative acetylsalicylic acid continued (N=45)	Preoperative acetylsalicylic acid cessation (N= 50)	P value
Length of hospital stay in days (SD)		0.7 (0.6)	0.8 (0.6)	0.378
Postoperative DVT/ PE	Yes	0 (0%)	0 (0%)	NA
	No	45 (100%)	50 (100%)	
Postoperative stroke	Yes	0 (0%)	0 (0%)	NA
	No	45 (100%)	50 (100%)	
Postoperative seroma	Yes	13 (28.9%)	13 (26%)	0.755
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Length of follow-up in days (SD)		94.2 (89.4)	93.8 (76.7)	0.980

RESULTS

There were no postoperative thromboembolism or stroke in both groups of patients. More patients in the continued acetylsalicylic acid group had hematoma formation at discharge (15 vs 9), and this was statistically significant (p= 0.020). Rate of postoperative seroma was similar between both groups (28.9% vs 26%). At 30 days postoperatively, there were no hernia recurrence, chronic pain or readmissions in both groups of patients. There was statistically significant increase in postoperative hematoma formation in the acetylsalicylic acid continuation group, but the size of bruising was not significantly different, and all bruising resolved with conservative management during follow-up clinic review.

CONCLUSION

This study found that preoperative continuance of aspirin is safe in select patients undergoing laparoscopic inguinal hernia repair without an increase in clinically significant complications