

Supplement Table 1. Additional descriptive statistics of demographic variables.

Variables	Total (n=112)
Comorbidities (n,%)	
Ischaemic Heart Disease	31 (28%)
Congestive Cardiac Failure	33 (29%)
Atrial Fibrillation	101 (90%)
Deep Vein Thrombosis	7 (6.3%)
Pulmonary Embolus	7 (6.3%)
Cerebrovascular Disease	33 (29%)
Hypertension	68 (61%)
Chronic Renal Failure	15 (13%)
Diabetes Mellitus	15 (13%)
Gastrooesophageal Disease	25 (22%)
Chronic Airway Disease	16 (14%)
Malignancy	11 (9.8%)
Comorbidity Scores (median, Q1-Q3)	
Nottingham Hip Fracture Score	5 (4-6)
Revised Cardiac Risk Index	1 (0-2)

Supplement Table 2. Arthroplasty vs fixation demographic variables and outcomes.

Variables	Arthroplasty (n =		p value
	29)	Fixation (n = 82)	
Age (years; mean, SD)	83.3 (\pm 5.5)	84.7 (\pm 6.3)	0.294
Sex (Female; n, %)	17 (59%)	59 (71%)	0.184
Cognition (Impaired; n, %)	8 (27%)	27 (33%)	0.595
CCI (median, Q1-Q3)	2 (2-2)	1 (0-3)	0.498
Time to Surgery from Last Dose (days; mean, SD)	2.6 (\pm 0.9)	2.1 (\pm 1.0)	0.026
Cause of Delay (reason; n,%)			
DOAC	13 (45%)	24 (29%)	0.127
Lack of surgical time	10 (35%)	25 (30%)	0.691
Medical optimisation	5 (17%)	14 (17%)	0.984
ASA Score (Grade; n, %)			
2	2 (6.9%)	9 (11%)	0.689
3	21 (72%)	50 (61%)	
4	6 (21%)	22 (27%)	
5	0 (0.0%)	1 (1.2%)	
Anaesthetic (n, %)			
General anaesthetic	26 (90%)	70 (85%)	0.561
Neuraxial anaesthetic	3 (10%)	12 (15%)	

Transfusion (<i>n</i> ,%)			
Preoperative	2 (6.9%)	6 (7.3%)	0.940
Intraoperative	2 (6.9%)	4 (4.9%)	0.679
Postoperative	3 (10%)	19 (23%)	0.136
Haemoglobin (g/dL; mean, SD)			
Admission	129 (±14)	123 (±16)	0.061
Day 1 postoperative	112 (±14)	100 (±17)	0.003
Drop	19 (±13)	22 (±14)	0.212
Serious Adverse Event (<i>n</i> ,%)	6 (21%)	19 (23%)	0.783
30-day Mortality (<i>n</i> ,%)	2 (6.9%)	13 (16%)	0.225

ASA- American Society of Anesthesiologist; CCI- Charlson Comorbidity Index; DOAC- direct oral anticoagulant.

Supplement Table 3. Demographics and outcomes of 30-day Mortality.

Demographics		Comorbidity Scores		Preoperative Medical condition	Operative Delay and Reasons			Operative Details			Outcomes	Mortality		Cause of Death				
Age (years)	Sex	Dementia (y/n)	CCI	NHS	Delay (Days)	Medical Optimization	Optimization needed	Lack of Operative Time (y/n)	Delayed to DOAC (y/n)	Transfusion (y/n)	ASA	Time to OR from admission (days)	Postop SAE		Delirium (y/n)	Length of Stay (days)	Inpatient Mortality (y/n)	
87	Male	No	9	6	Exacerbation of COPD	0	No		No	No	Yes	3	1.3		No	6	No	Palliated with pneumonia post re-admission (suicide attempt)
89	Male	No	4	6		3	No		No	Yes	No	3	4.4		No	7	No	Right sided heart failure / AMI
87	Female	No	1	5	rAF	3	Yes	rAF workup	No	No	No	4	3.9	LRTI	No	12	Yes	Sepsis post-aspiration pneumonia
92	Female	No	8	6		2	No		No	Yes	No	3	3.3	RF	No	4	Yes	Respiratory failure from sepsis
86	Male	Yes	3	7	rAF	2	Yes	rAF workup	No	No	No	4	4.2		No	6	No	Not known
89	Male	No	2	7		3	No		No	Yes	Yes	4	4.7	LRTI	No	7	Yes	Sepsis post-pneumonia
90	Female	No	3	5	Heart failure	1	Yes	Echocardiogram	No	No	No	3	3.5		No	3	Yes	Cerebrovascular accident

87	Female	Yes	1	7		1	No		Yes	No	No	4	0.9	PE	Yes	5	No	Respiratory failure from bilateral pulmonary embolus
91	Male	Yes	1	7		0	No		No	No	No	4	0.7		Yes	3	No	Sepsis and multiorgan failure
97	Female	No	5	6	Acute pulmonary odema	1	Yes	Diuresis	No	No	No	4	1.8	LRTI	No	3	Yes	Congestive heart failure
86	Female	No	7	5		0	No		No	No	No	3	0.8	AMI	No	1	Yes	Fat embolism
83	Male	Yes	2	6		0	No		No	No	Yes	3	0.7	AKI	Yes	10	No	Aspiration pneumonia
79	Male	No	8	7	Anaemic	2	Yes	Echocardiogram	No	Yes	Yes	4	2.3	AKI	No	3	No	Haemorrhagic shock
92	Female	No	1	4		2	No		No	Yes	No	3	2.3		No	8	No	Not known
86	Male	Yes	2	6		N/A								Non-op	No	0	Yes	Pneumonia
94	Male	Yes	3	9	NSTEMI	1	Yes	Diuresis	No	No	No	4	2.0	AKI	Yes	10	Yes	AMI

AKI- Acute Kidney Injury; AMI- Acute Myocardial Infarction; CCI-Charlson Comorbidity Index; COPD-Chronic Obstructive Pulmonary Disease; LRTI- Lower Respiratory Tract Infection; Nottingham Hip Fracture Score- NHFS; NSTEMI- Non ST-elevation Myocardial Infarction; OR- Operating Room; PE- pulmonary embolism; rAF- Rapid Atrial Fibrillation; RF- Respiratory Failure; SAE- Serious Adverse Event.

Supplement Table 4. Serious Adverse Events (SAE) & Mortality.

SAE	SAE timing postadmission (days)	Delirium (y/n)	ICU admission (y/n)	Length of Stay (days)	Inpatient Mortality (y/n)	30-day Mortality (y/n)
LRTI	2.9	No	No	15	No	No
PE	9.7	No	Yes	40	No	No
AKI	1.0	No	No	30	No	No
RF	16.5	Yes	No	31	No	No
LRTI	2.9	No	No	7	Yes	Yes
CVA	2.9	No	No	15	No	No
PE	3.7	Yes	No	5	No	Yes
LRTI	6.8	No	No	10	No	No
LRTI	0.4	No	No	3	Yes	Yes
AMI	0.9	No	No	0	Yes	Yes
AKI	1.2	Yes	No	10	No	Yes
GIH	6.8	Yes	No	22	No	No
LTRI	12.4	Yes	No	19	No	No
LRTI	2.8	Yes	No	10	No	No
CCF	10.3	Yes	No	25	No	No
AKI	0.9	No	No	14	No	No
Sepsis	14.6	No	No	15	No	No
AKI	1.9	No	No	3	No	Yes
LRTI	2.4	Yes	No	8	No	No
LRTI	11.6	No	No	12	No	No
Sepsis	3.3	No	No	24	No	No
AMI	11.8	No	No	14	No	No
AKI / NSTEMI	0.4	Yes	No	10	Yes	Yes
AKI	1.7	No	No	22	No	No
AKI	1.8	No	No	10	No	No

AKI- Acute Kidney Injury; AMI- Acute Myocardial Infarction; ICU- Intensive Care Unit; LRTI- Lower Respiratory Tract Infection; NSTEMI- Non ST-elevation Myocardial Infarction; PE- pulmonary embolism; RF- Respiratory Failure; SAE- Serious Adverse Event.

Supplement Table 5. Matched control vs DOAC variables and outcomes.

Variables	Control (n = 112)	DOAC (n = 112)	p value
Age (years; mean, SD)	84.3 (±6.1)	84.3 (±6.1)	0.983
Sex (Female; n, %)	76 (68%)	76 (68%)	1.000
Cognition (Impaired; n, %)	27 (24%)	36 (32%)	0.181

Ischaemic Heart Disease (<i>n</i> , %)	13 (12%)	31 (28%)	0.002
Chronic Renal Failure (<i>n</i> , %)	7 (6.2%)	15 (13%)	0.072
Diabetes Mellitus (<i>n</i> , %)	5 (4.6%)	15 (13%)	0.019
Time to Surgery from Admission (days; mean, SD)	1.2 (±0.7)	1.8 (±1.3)	<0.001
Cause of Delay (reason; <i>n</i> ,%)			
DOAC	N/A	37 (33%)	-
Lack of surgical time	19 (17%)	35 (31%)	0.008
Medical optimisation	2 (1.8%)	19 (17%)	<0.001
ASA Score (Grade; <i>n</i> , %)			0.096
2	23 (21%)	11 (9.9%)	
3	67 (60%)	71 (64%)	
4	21 (19%)	28 (25%)	
5	0 (0%)	1 (0.9%)	
Anaesthetic (<i>n</i> , %)			<0.001
General anaesthetic	55 (50%)	96 (86%)	
Neuraxial anaesthetic	56 (50%)	15 (14%)	
Operation type (<i>n</i> , %)			0.038
Cemented hemiarthroplasty	36 (32%)	20 (18%)	
Cannulated screws	13 (12%)	9 (8.1%)	
Dynamic hip screw	5 (4.5%)	4 (3.6%)	
Long femoral nail	15 (14%)	29 (26%)	
Short femoral nail	30 (27%)	40 (36%)	
Uncemented hemiarthroplasty	3 (2.7%)	6 (5.4%)	
Total hip replacement	9 (8.1%)	3 (2.7%)	
Length of Stay (days; median, Q1–Q3)	6.9 (4.2–11)	11 (6.5–18)	<0.001
Inpatient Mortality (<i>n</i> ,%)	1 (0.9%)	8 (7.1%)	0.017
30-day Mortality (<i>n</i> ,%)	7 (6.3%)	16 (14%)	0.225

ASA- American Society of Anesthesiologist; DOAC- direct oral anticoagulant.