Percentage of circumference of calcification, $n(\%)$			Complications(-)(n=323)	Complications(+)(n=28)	P-value
		0%	114 (35.3%)	12 (42.9%)	0.509
		25%	135 (41.8%)	8 (28.6%)	
25%	50%	50%	58 (18.0%)	5 (17.9%)	
75%	100%	75%	7 (2.2%)	1 (3.6%)	
		100%	9 (2.8%)	2 (7.1%)	
Locations of calcification, n(%)			Complications(-)(n=323)	Complications(+)(n=28)	P-value
0		Ventral	6 (1.9%)	1 (3.6%)	0.282
		Dorsal	171 (52.9%)	10 (35.7%)	
Ventral	Dorsal	Ventral and dorsal	32 (9.9%)	5 (17.9%)	

**Figure S1** Comparison of the incidence of vascular access site complications between the open puncture and percutaneous puncture groups by percentage of arterial circumference calcified and location of calcification.

Table S1 Balancing of the groups using inverse probability weighting

Devian proting variables	Original			Pseudo		
Perioperative variables	OP group (n=100)	PP group (n=251)	SMD	OP group (n=355.32)	PP group (n=353.87)	SMD
Age (years)	83.5 [80.0–87.0]	84.0 [81.0–87.0]	0.058	83.0 [80.1–87.0]	84.0 [81.0–87.0]	0.003
Male	29.00 [29]	30.68 [77]	0.037	31.42 [111.65]	29.78 [105.39]	0.036
BMI (kg/m <sup>2)</sup>	22.865 [20.163–26.200]	22.190 [19.780–24.935]	0.223	22.194 [19.456–24.734]	22.447 [19.880–25.420]	0.084
Hypertension	86.00 [86]	81.27 [204]	0.128	80.23 [285.07]	82.73 [292.76]	0.065
Dyslipidemia	51.00 [51]	55.38 [139]	0.088	49.82 [177.03]	52.95 [187.38]	0.063
Diabetes mellitus	30.00 [30]	29.48 [74]	0.011	27.58 [97.98]	30.04 [106.29]	0.054
Chronic renal disease	21.00 [21]	16.73 [42]	0.109	21.50 [76.39]	17.99 [63.64]	0.088
Cerebrovascular disease	18.00 [18]	11.55 [29]	0.182	12.71 [45.16]	13.17 [46.60]	0.014
Respiratory disease	19.00 [19]	12.75 [32]	0.172	15.42 [54.78]	15.31 [54.18]	0.003
Coronary artery disease	23.00 [23]	20.32 [51]	0.065	21.81 [77.51]	21.62 [76.49]	0.005
Preoperative number of anticoagulant and antiplatelet drugs used	0.5 [0–1]	0.0 [0–1]	0.091	0 [0–1]	0 [0–1]	0.050
Preoperative hemoglobin (g/dL)	11.45 [10.20–12.50]	11.20 [10.00–12.40]	0.033	11.10 [10.00–12.20]	11.20 [10.00–12.40]	0.072
Preoperative platelet count (×10 <sup>4</sup> /µL)	17.3 [13.6–21.6]	18.1 [15.1–22.3]	0.225	17.66 [13.92–22.73]	17.72[14.40–22.10]	0.049
Preoperative ABI	1.00 [0.91–1.07]	1.02 [0.94–1.09]	0.295	1.03 [0.93–1.08]	1.01 [0.93–1.09]	0.083
Depth to CFA (mm)	21.05 [14.05–31.28]	18.90 [14.10–25.10]	0.317	16.86 [10.12–27.96]	19.83 [14.20–26.31]	0.142
Sheath/CFA ratio	0.77 [0.69–0.84]	0.75 [0.68–0.81]	0.271	0.75 [0.66–0.82]	0.75 [0.68–0.82]	0.090
Calcification of the ventral surface of the CFA	2.0 [2]	1.99 [5]	0.001	1.46 [5.21]	1.92 [6.78]	0.035
Calcification of the dorsal surface of the CFA	46.00 [46]	53.78 [135]	0.156	46.38 [164.78]	50.11 [177.31]	0.075

Data are presented as percentage [numbers] or medians with interquartile range. OP, open puncture; PP, percutaneous puncture; SMD, standardized mean difference; BMI, body mass index; ABI, ankle-brachial index; CFA, common femoral artery.