

Comparison of patients’ preference and Quality of Life after coronary interventions with radial, femoral and brachial approach

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Background

According to the current knowledge, radial access (RA) is the safest. Femoral access (FA) is used primarily for complicated procedures or as a conversion from unsuccessful radial attempt. Brachial access (BA) is extremely rare and is used as a last choice as it is connected with the highest risk of puncture site complications. Nevertheless, apart from clinical perspective, it is also important to determine the most convenient access from patients’ perspective, as it should be an important factor in clinical decision making.

Materials&methods

Data was acquired by interviewing 143 patients who had undergone a PCI or coronary angiography less than a year priorly, via telephonic interview due to COVID-19 situation. Interviews were conducted using a proprietary questionnaire (Fig. 1) and modified EQ-5D-3L questionnaire. Patients were divided into three groups according to the vascular access: RA (n=72), FA(n=63) and BA(n=11). The obtained data was analyzed with appropriate statistical tests using the software TIBCO Statistica (version 13. Palo Alto, CA, USA).

Results

There was no difference in long term mortality or cardiovascular events. In the Quality of Life (QoL) questionnaire, the only category which differed significantly was self-care ability (Tab.1). The percentage of reported self-care problems was the highest in BA group (p=0.03) and statistically significant improvement was observed only in 6 months period (p<0.05), in comparison with significant improvement in 1 month in other groups (RA: p=0.01, FA: p<0.05) (Fig. 2). Patients who had undergone several procedures with the use of more than one access (n=44) considered the RA (70.4%) as the most convenient approach (FA: 29.6%, BA: 0%). Patients would undergo a future hypothetical procedure with the same access most willingly after undergoing a procedure from RA (Fig.3).

Figure 2. Change of self-care problems after procedure in time

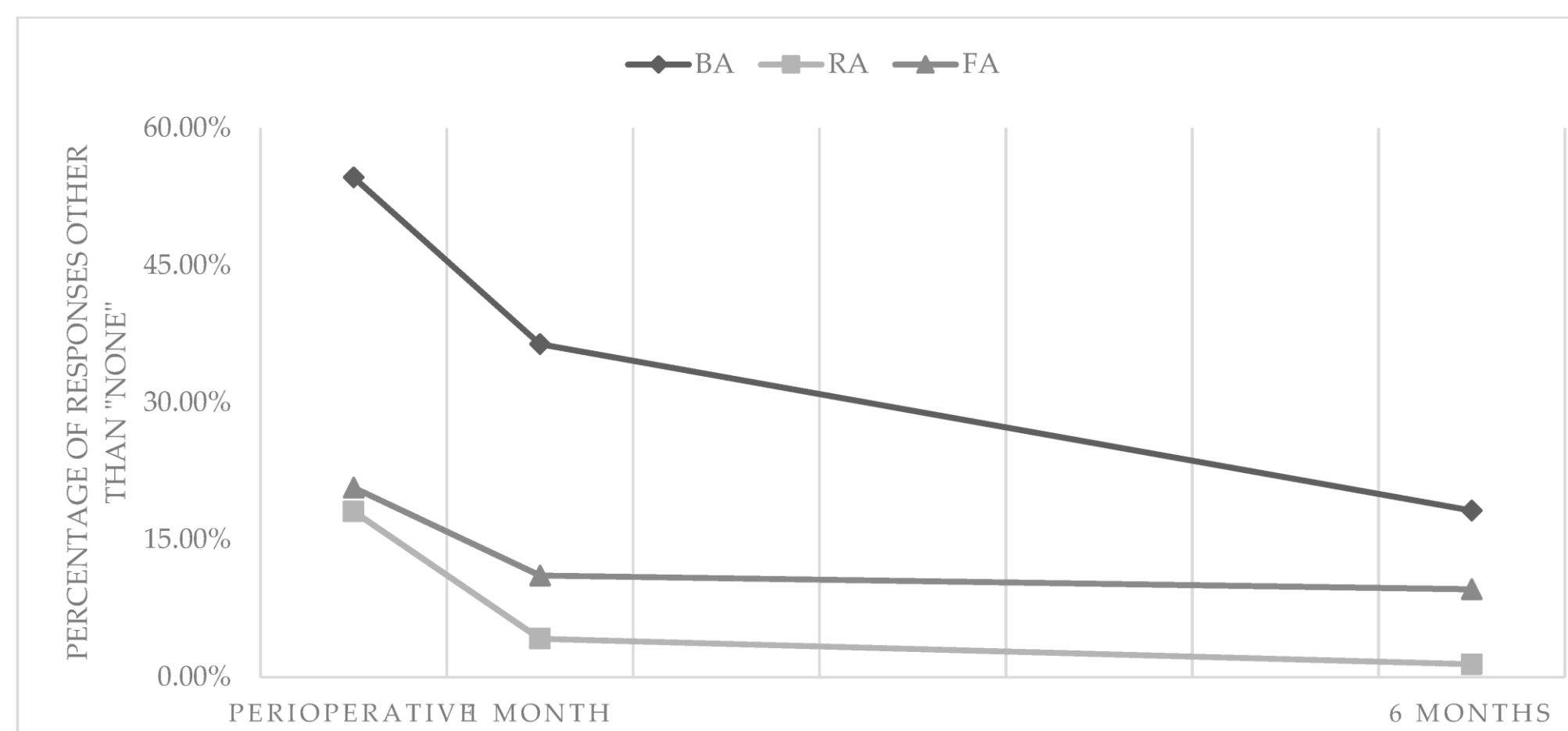
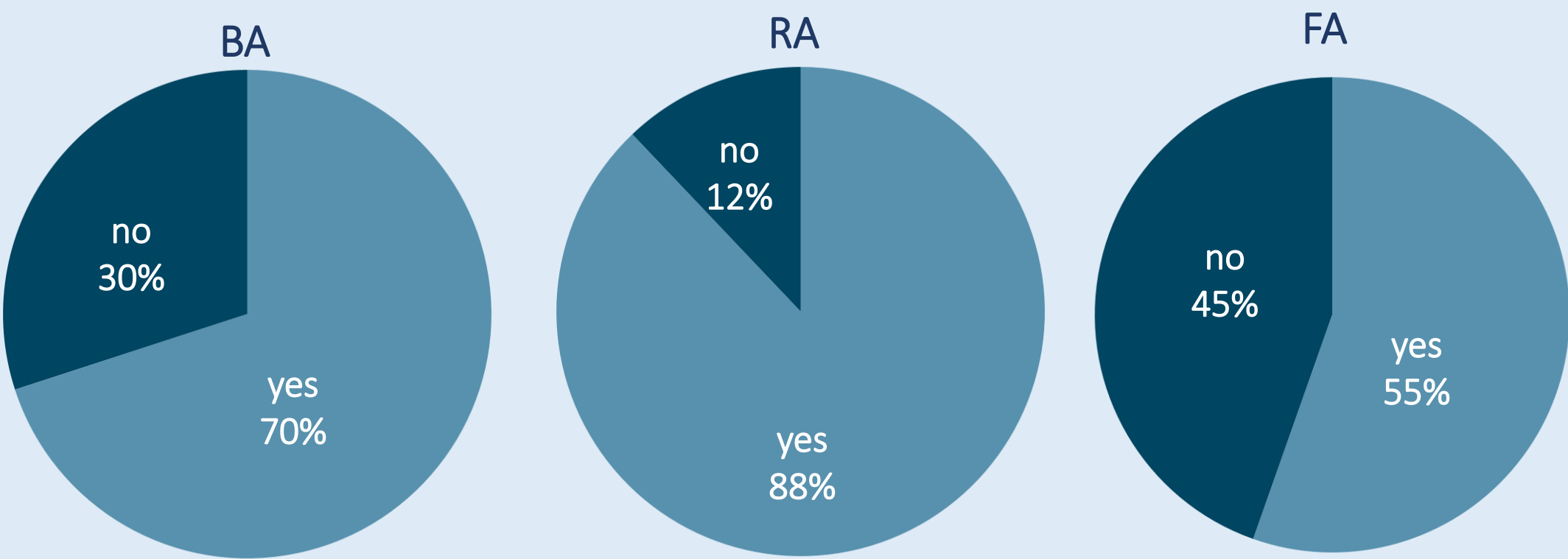


Figure 3. Responses to the question: „Would you choose the same access again?” (p=0.001)



Conclusions

RA is the most convenient access according to patients’ preference. Self-care problems are the most severe and take longer to recover after BA.

Figure 1. Proprietary interview questionnaire

Have any of the following occurred since the procedure?	yes	no	
heart attack			
stroke/transient ischemic attack (TIA)			
Have you undergone since the procedure any of the following?			
coronarography			
PCI			
CABG			
Would you choose the same vascular access again if you had a choice?			
	RA	FA	BA
If not, which other would you like to choose? [0/1]			
Which is the most convenient and best vascular access in your opinion?*[0/1]			

Table 1. QoL questionnaire results

Time	Problems	RA	FA	BA	p value
Periprocedural	Mobility none	72.7%	79.2%	71.4%	0.6316
	moderate	9.1%	9.7%	17.5%	
	extreme	18.2%	11.1%	11.1%	
	Self care none	45.5%	81.9%	79.4%	0.0335
	moderate	45.5%	12.5%	14.3%	
	extreme	9.1%	5.6%	6.4%	
	Usual activities none	27.3%	62.5%	49.2%	0.0545
	moderate	45.5%	26.4%	38.1%	
	extreme	27.3%	11.1%	12.7%	
	Pain or discomfort none	81.8%	50.0%	50.8%	0.2161
	moderate	9.1%	43.1%	42.9%	
	extreme	9.1%	6.9%	6.4%	
1 month	Anxiety or depression none	81.8%	61.1%	66.7%	0.5656
	moderate	9.1%	38.9%	25.4%	
	extreme	9.1%	0.0%	7.9%	
	Mobility none	81.8%	87.5%	85.7%	0.8178
	moderate	9.1%	12.5%	14.3%	
	extreme	9.1%	0.0%	0.0%	
	Self care none	63.6%	95.8%	88.9%	0.0028
	moderate	27.3%	4.2%	7.9%	
	extreme	9.1%	0.0%	3.2%	
	Usual activities none	45.5%	73.6%	68.3%	0.1822
	moderate	36.4%	16.7%	23.8%	
	extreme	18.2%	9.7%	7.9%	
6 months	Pain or discomfort none	90.9%	86.1%	71.4%	0.0748
	moderate	0.0%	13.9%	27.0%	
	extreme	9.1%	0.0%	1.6%	
	Anxiety or depression none	81.8%	76.4%	77.8%	0.9722
	moderate	9.1%	23.6%	17.5%	
	extreme	9.1%	0.0%	4.8%	
	Mobility none	100.0%	90.3%	79.4%	0.0761
	moderate	0.0%	8.3%	19.1%	
	extreme	0.0%	1.4%	1.6%	
	Self care none	81.8%	98.6%	90.5%	0.0347
	moderate	18.2%	1.4%	6.4%	
	extreme	0.0%	0.0%	3.2%	
	Usual activities none	63.6%	80.6%	69.8%	0.2499
	moderate	27.3%	15.3%	23.8%	
	extreme	9.1%	4.2%	6.4%	
	Pain or discomfort none	81.8%	84.7%	76.2%	0.4551
	moderate	18.2%	15.3%	23.8%	
	extreme	0.0%	0.0%	0.0%	
	Anxiety or depression none	90.9%	84.7%	79.4%	0.5226
	moderate	0.0%	15.3%	14.3%	
	extreme	9.1%	0.0%	6.4%	