DECISIONAL CONFLICT IN PERIPHERAL ARTERIAL DISEASE: ASSOCIATION WITH TREATMENT CHOICE AND HEALTH STATUS

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PORTRAIT Registry
Patient-centered Outcomes Related to TReatment practices in peripheral Arterial disease: Investigating Trajectories

BACKGROUND

- 8.5 million US patients have peripheral artery disease (PAD)
- Invasive (endovascular and surgical) and non-invasive (medications and exercise therapy) approaches are both effective for PAD symptom relief
- It is unknown whether PAD patients experience decisional conflict (feeling uncertain, uninformed, unclear about values, feeling unsupported in decision making) in treatment decision making and whether it is associated with treatment choice and health status outcomes

AIMS

1. To measure the prevalence of decisional conflict in a cohort of patients with new or exacerbation of PAD claudication symptoms
2. To examine the association between the occurrence of decisional conflict and choice of treatment (invasive versus non-invasive)
3. To examine the association between the occurrence of decisional conflict and 1-year health status outcomes

METHODS

- We analyzed 1109 patients who presented with new or exacerbation of PAD symptoms between June 2011 and September 2015 to 16 specialty PAD clinics in the US, the Netherlands, and Australia to seek treatment for their PAD (PORTRAIT Registry).
- Demographic and socioeconomic information was obtained through standardized patient interviews before patients received treatment; medical information was abstracted from patient medical records.
- Decisional conflict was measured at 3-months using the 4-item SURE instrument[1] (Table 1). Answering no to any question registers some degree of decisional conflict present. Treatment information (invasive versus non-invasive) was also collected during this interview.

Table 1. SURE Instrument Categories and Questions[1]

Acronym	Test Question
Sure of Myself	Do you feel sure about the best choice for you?
Understand Information	Do you know the benefits and risks of each option?
Risk-benefit Ratio	Are you clear about which benefits and risks matter most to you?
Encouragement	Do you have enough support and advice to make a choice?

METHODS

- Health status was measured using the Peripheral Artery Questionnaire (PAQ)[2] and was assessed at baseline and at the 1-year follow-up interview.
- Patient characteristics were compared by the occurrence of decisional conflict using student's t-test for continuous data and chi square for categorical variables
- Multivariable logistic regression examined association between decisional conflict and primary treatment choice and multivariable linear regression examined association between decisional conflict and health status outcomes. Both models adjusted for country, clinic site, provider specialty; baseline PAQ health status for linear regression only; age, sex, race; marital, education, and insurance status; ankle brachial index, disease location; history of PAD, myocardial infarction, transient ischemic attack, cerebrovascular incident, coronary artery bypass graft, diabetes, smoking status; treatment type for the linear regression only; patient decision-making preference.

RESULTS

Table 2. Patient Characteristics Stratified by Decisional Conflict

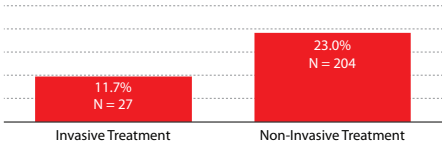
	SURE Test Decisional Conflict Present		
	Yes (n=231)	No (n=878)	P-Value
Demographics			
Age (mean years ± SD)	67.5±9.1	67.5±9.4	0.960
Sex			0.230
Male	66.2	62.0	
Female	33.8	38.0	
White/Caucasian	89.6	80.9	0.001
Socioeconomics			
Education high school or above	52.0	72.5	<0.001
Insurance	90.9	74.4	<0.001
Medical History			
ABI (ratio ± SD)	0.67±0.19	0.70±0.19	0.527
Peripheral vascular intervention	21.2	29.0	0.017
Congestive heart failure	8.7	9.2	0.789
TIA/CVA	12.1	11.4	0.756
Prior MI	15.2	19.2	0.152
Smoke status			0.602
Never	10.9	10.4	
Former	49.6	53.2	
Current	32.9	36.4	
Diabetes	32.9	33.1	0.944
Participation in exercise therapy (3 month)			
Participated following diagnosis	40.2	31.0	0.007
PAD-specific exercise, unsupervised	33.3	19.8	0.001
PAD-specific exercise, supervised	3.8	4.1	0.240
Non-PAD specific	3.8	4.3	0.290

Abbreviations: ABI, ankle brachial index; TIA, transient ischemic attack; CVA, cerebrovascular accident; MI, myocardial infarction; PAD, peripheral artery disease; All numbers are percentages unless otherwise noted

RESULTS

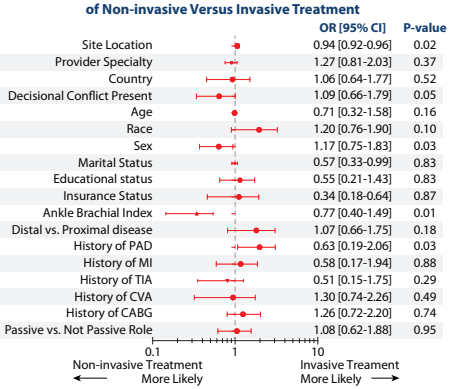
- Decisional conflict was present for 231 patients (20.8%). Demographic differences shown in Table 2.
- Decisional conflict was more prevalent in those patients who had non-invasive treatment (23.0%) versus those who had invasive treatment (11.7%) (Figure 1).

Figure 1. Prevalence of Decisional Conflict In Invasive and Non-invasive Treatment Groups



- Patients who experienced decisional conflict had a 42% lower odds of undergoing an invasive treatment (adjusted OR=0.58, 0.34-1.00 95% CI, p=0.050) (Figure 2).

Figure 2. Logistic Regression Odds Ratios (with 95% CI) of Non-invasive Versus Invasive Treatment



Abbreviations: PAD, peripheral artery disease; MI, myocardial infarction; TIA, transient ischemic attack; CVA, cerebrovascular accident; CABG, coronary artery bypass graft

RESULTS

- Experiencing decisional conflict was associated with, on average, a 4-point lower PAQ summary score in patients' 1-year health status outcomes as compared with those who did not experience decisional conflict (adjusted B=-4.72, -9.38-(-0.06) 95% CI, p=0.047).

LIMITATIONS

- Treatments were patient reported and misclassification was a possibility.
- PORTRAIT is observational and there is risk of residual confounding and bias related to treatment selection.
- Formal mediation or moderation analysis was not completed.
- Decisional conflict measurement may be impacted by the timing of the patient's treatment, which is an aspect that should be considered in future studies.

CONCLUSION

- Decisional conflict occurred in 1 in 5 PORTRAIT PAD patients.
- Experiencing decisional conflict was more common in patients undergoing non-invasive management options for their PAD symptoms and was associated with worse health status outcomes at 1-year, independent of treatment strategy.
- Future work should examine methods for reducing decisional conflict in PAD patients, especially among those opting for non-invasive management of their disease.

REFERENCES

1. Légaré F, Kearing, S, Clay, K, Gagnon, S, D'Amours, D, Rousseau, M, O'Connor, A. Are you SURE? Assessing patient decisional conflict with a 4-item screening test. Canadian Family Phys. 2010;56(1):e308-314.
2. Spertus JA, Jones, P, Poler, S, Rocha-Singh, K. The peripheral artery questionnaire: a new disease-specific health status measure for patients with peripheral arterial disease. Am Heart J. 2004;147(1):301-308.

DISCLOSURES

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