Evaluating the Management of Intermittent Claudication before and after the Appropriate Use Criteria

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BACKGROUND

- Peripheral artery disease (PAD) affects over 200 million people worldwide
- Intermittent claudication (IC) is the most common symptom among symptomatic cases and has low progression to chronic limb threatening ischemia (CLTI). However, the number of interventions for IC are increasing
- In response, the Society for Vascular Surgery (SVS) created the appropriate use criteria (AUC) for interventionalists

AUC RECOMMENDATIONS

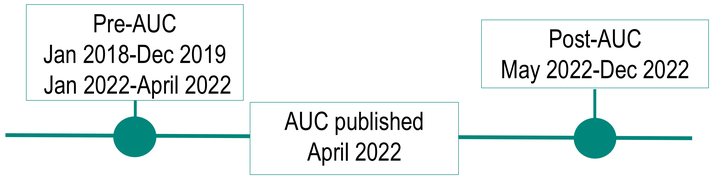
1. First Line treatment for IC is medical (exercise therapy, optimal medical therapy (OMT), and smoking cessation)
2. Interventions may be of benefit among those with refractory IC or with severe lifestyle limiting disease and short distance walking
3. Lesions in common femoral artery should be managed with endarterectomy over endovascular
4. Infrapopliteal interventions have no benefits over risks

AIM

The aim of this study is to evaluate changes in practice patterns for intermittent claudication before and after the publication of the AUC guidelines

METHODS

Descriptive study utilizing the Vascular Quality Initiative (VQI) registries for peripheral vascular interventions (PVI), suprainguinal, and infrainguinal open surgery



Compared key AUC variables for patient, disease, and surgical factors for patients who underwent an intervention for IC pre- and post-AUC guidelines

RESULTS

- PVI registry: pre-AUC 9,177 | post-AUC 6,715
- Suprainguinal registry: pre-AUC 1,867 | post-AUC 506
- Infrainguinal registry: pre-AUC 2,699 | post-AUC 781

Table 1: Demographics table pre- and post-AUC

Characteristics N (%)	Pre-AUC (n=7,969)	Post-AUC (n=7,923)	Change (%)	P-value
Age >80	1099 (12.0%)	868 (12.9%)	7.5	.08
Severe disease	6108 (66.6%)	4835 (72.0%)	8.1	<.0001
Smoking	3816 (41.6%)	2732 (40.7%)	-2.2	.26
Pre-op OMT	6359 (69.3%)	4641 (69.1%)	-0.3	.82
Post-op OMT	7311 (79.7%)	5571 (83.0%)	4.1	<.0001
CHF	1171 (12.8%)	1016 (15.1%)	18.0	<.0001
CAD	3018 (32.9%)	2254 (33.6%)	2.1	.38
COPD	2597 (28.3%)	1845 (27.5%)	-2.8	.26
Diabetes	3687 (40.2%)	2648 (39.4%)	-2.0	.35
Dialysis	250 (2.7%)	131 (2.0%)	-25.9	.002

OMT: optimal medical therapy (aspirin and statin)

Results: Observed changes

AORTOILIAC TASC II C/D

-33.7%

Pre- 872 (9.5%)
Post- 424 (6.3%)
P <.001

FEMOROPOPLITEAL TASC II C/D

-22.4%

Pre- 557 (6.1%)
Post- 313 (4.7%)
P <.001

COMPLEX CFA

+52.9%

Pre- 313 (3.4%)
Post- 350 (5.2%)
P <.001

ISOLATED INFRAPOPLITEAL

+62.9%

Pre- 319 (3.5%)
Post- 381 (5.7%)
P <.001

SUPRAINGUINAL	Pre-AUC n=1,846	Post-AUC n=506	change (%)	P value
Extra-anatomic	681 (36.9%)	176 (34.8%)	-5.7	.4
Axillary origin	178 (9.6%)	35 (6.9%)	-28.1	.07
Femoral origin	503 (27.3%)	141 (27.9%)	2.2	.78

INFRAINGUINAL	Pre-AUC n=2,699	Post-AUC n=781	Change (%)	P value
Fem-pop bypass	1906 (70.6%)	560 (71.7%)	1.6	.6
Infra-pop bypass	667 (24.7%)	201 (25.7%)	4.0	.57
SSGSV	1298 (48.1%)	351 (44.9%)	-6.7	.12
Non-SSGSV	1472 (54.5%)	458 (58.6%)	7.5	.05

DISCUSSION

- There have been some improvements in patient and disease characteristics, and a reduction in endovascular interventions for complex aortoiliac and femoropopliteal disease since the AUC
- However, there still needs to be improvement in key areas including reduction in endovascular intervention for IC, particularly for CFA and infrapopliteal disease, reduction in bypass surgery, and improved pre-op OMT and smoking cessation