Table. Distribution of procedures

		Thoracic		*Thoracoabdominal*		*Aortoiliac*		*Subclavian/carotid/vertebral*		*Others*	
	Age, years	*Open*	*Endo*	*Open*	*Endo*	*Open*	*Endo*	*Open*	*Endo*	*Open*	*Endo*
Marfans (n = 42)	37.4 ± 15.7	69	11	16	3	9	8	5	1	12	5
EDS[a] (n = 15)	42.3 ± 15.9	14	3	3	2	3	4	0	1	2	2
LDS (n = 6)	35.8 ± 15.5	9	0	3	0	1	2	4	3	1	1
Total	-	92	14	22	5	13	14	9	5	15	8

[a]One patient had both EDS & LDS, and underwent 2 open thoracic and 1 endovascular subclavian intervention

Conclusions: Genetic identification of CTDs is rapidly expanding, allowing for categorization of previously undiagnosed patients. Endovascular options are viable and useful when there is acceptable vascular morphology and the procedure is planned properly, potentially in a hybrid modality.

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PVSS14.

Physician and Self Referral Patient Patterns for Thoracic Outlet Syndrome Are Excellent

Kendall Likes, Danielle Rochlin, Quinn Salditch, Thadeus Dapash, Yen Baker, Roxanne DeGuzman, Julie A. Freischlag. Johns Hopkins Medical Institutions, Baltimore, Md

Objectives: The purpose of this study was to categorize patients referred to a specialized thoracic outlet syndrome (TOS) practice.

Methods: Demographic and clinical data on all patients who were referred for TOS between 2006 and 2010 were retrospectively reviewed from a prospectively maintained, IRB approved database and patient records.

Results: Between 2006-2010, 621 patients were referred for TOS (433F/188M; mean age, 39 years [range, 10-87]). 571 (92%) were diagnosed with TOS-421 (74%) neurogenic, 126 (22%) venous and 24 (4%) arterial. Of the 525 physician referrals, 478 (91%) had TOS and of the 93 self referrals, 90 (97%) had TOS.

The 421 patients with neurogenic TOS (NTOS) (304F/117M) had symptoms on average for 56 months (range, 1-516). 271 (64%) were initially treated with TOS specific physical therapy (PT) and 100 (37%) improved. 178 (42%) underwent a lidocaine block and 145 (81%) had a positive block. 74 (18%) patients underwent botox injections-44 (60%) were positive and the average number of botox injections was 1.3. 140 (33%) underwent First Rib Resection and Scalenectomy (FRRS) and 128 (91%) improved. Of patients undergoing FRRS, 92 (66%) had a lidocaine block, 82 (89%) of which were positive. Of patients with a positive lidocaine block, 74 (90%) improved following FRRS. Of patients undergoing FRRS, 31 (22%) underwent botox injections, 15 (48%) of which were positive. Of patients with a positive lidocaine block, 14 (93%) improved following FRRS. Average length of time between initial visit and operation was 6.4 months (Range 2 weeks-34 months) and average follow up was 13 months (Range 1 week-49 months).

Conclusions:

1. Both referring physicians and patients are very accurate in their preliminary diagnosis of TOS-neurogenic, venous, or arterial.
2. In a specialized TOS practice, 2/3 of patients are sent to TOS specific PT and 1/3 improve from that alone.
3. 1/3 of patients referred for NTOS eventually undergo FRRS with a 91% success rate.

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PVSS15.

The Association Between Erythrocyte n-3 Polyunsaturated Fatty Acids (n-3 PUFAs) Content and Inflammation in Male Patients With Peripheral Artery Disease (PAD)

Marlene Grenon[1], Christopher D. Owens[1], Hugh Alley[1], Karen Chong[1], Eric Vittinghoff[1], William Harris[2], Millie Hughes-Fulford[1], Joseph Rapp[1], Michael Conte[1]. [1]UCSF, San Francisco, Calif; [2]University of South Dakota, Vermillion, SD

Objectives: Dietary intake of n-3 PUFAs has been associated with cardiovascular disease, but the relationship to PAD is unclear. PAD patients have an increased burden of systemic inflammation. In a cross-sectional cohort study, we evaluated the relationship between n-3 PUFAs content of red blood cells (omega-3 index) and biomarkers of inflammation.

Methods: This was a prospective cohort study of patients (n = 83) presenting to vascular surgery clinic for evaluation of PAD. We used linear regression to evaluate the independent association between the omega-3 index (gas chromatography) and inflammation (hsCRP, IL-6, TNF-α and ICAM-1; ELISA kits).

Results: 70 patients had PAD while 13 were found to have a normal ankle-brachial index (ABI). Mean (± SD)

age was 67 ± 7 years. Mean ABI was 0.85 ± 0.23. The omega-3 index decreased across AHA hsCRP categories (Fig; $P = .04$). One percentage point decrease in the omega-3 index was associated with increases in CRP (14%, 95% CI 0; 25; $P = .04$), IL6 (8%; 95% CI, 1-15; $P = .02$) and possibly ICAM-1 (4%; 95% CI, 1-12; $P = .13$), but not TNF-α. After adjusting for age, race, HDL, smoking status, ABI and the body-mass index, the omega-3 index remained significantly (negatively) associated with systemic inflammation as measured by hsCRP in a male population at risk or suffering from PAD ($P = .05$).

Conclusions: In a contemporary cohort of patients with PAD, the omega-3 index was negatively associated with biomarkers of inflammation. Our findings suggest a rationale for future studies of dietary manipulation of omega-3 index to reduce inflammation in patients with PAD.

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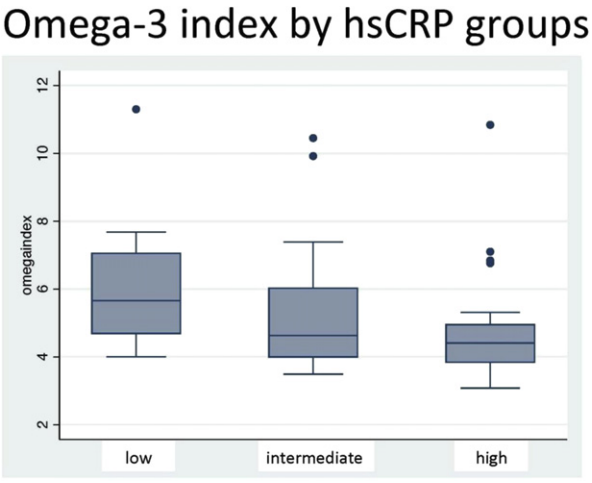

Fig.

PVSS16.

Expanded Polytetrafluoroethylene (ePTFE) Versus Autologous Vein as a Conduit for Vascular Reconstruction in Modern Combat Casualty Care

J.Devin B. Watson[1], Jonathan J. Morrison[3], Irma L. McNamee[2], Thomas W. Evans[2], Todd E. Rasmussen[2]. [1]San Antonio Military Medical Center, San Antonio, Tex; [2]US Army Institute of Surgical Research, Fort Sam Houston, Tex; [3]Academic Department of Military Surgery and Trauma, Royal Centre for Defence Medicine, Birmingham, United Kingdom

Objectives: Reconstruction of vascular injury often requires autologous vein (AV) or expanded polytetrafluoroethylene (ePTFE) conduit. To date the durability of ePTFE as an adjunct to vascular repair in the combat setting is unknown. The objective of this study is to compare the long-term effectiveness of ePTFE to AV in repair of wartime vascular injury.

Methods: US service personnel undergoing vascular repair (2002-2012) were identified. Patients in whom ePTFE was used as an interposition conduit (n = 25) were matched to those who received AV (n = 24). Injury and operative factors were assessed and freedom from graft-related complication quantified using Kaplan-Meier log-rank test.

Results: Follow up for the ePTFE and AV groups was 71 and 62 months respectively. There was no difference between ePTFE and AV groups in age, injury severity or, mangled extremity severity scores. In the overall cohort there was an apparent but not significantly greater freedom from graft related complication for AV compared to ePTFE (65.4% vs 17.1%; $P = .13$). In the extremity position AV demonstrated greater freedom from graft related complication than ePTFE (Fig). In the carotid/subclavian/axillary positions ePTFE performed equally well as AV ($P = .9$).

Conclusions: Autologous vein is a more durable conduit than ePTFE in repair of wartime extremity vascular injury while ePTFE is effective and durable in the carotid, subclavian, and axillary locations.

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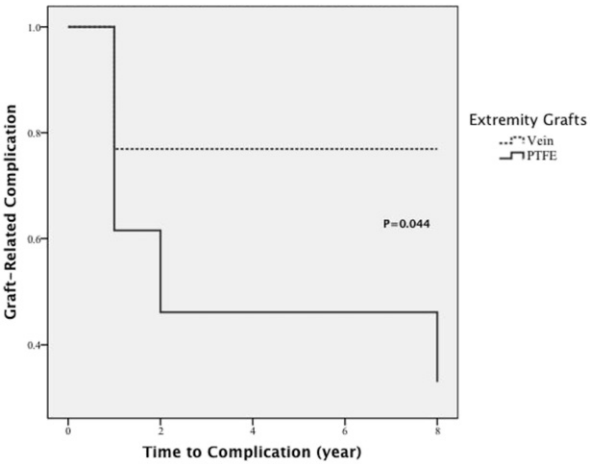

Fig. This figure displays FGRC in extremity PTFE grafts was 15.4%/8.05 yr and 76.9%/8.05 yr for extremity autologous vein grafts ($P = .044$).

PVSS17.

Surgical Revision for Non-Maturing Arteriovenous Fistulas

Timothy K. Liem, Francis Hacker, Ashley A. Price, Amir F. Azarbal, Gregory J. Landry, Erica L. Mitchell, Gregory L. Moneta. Oregon Health & Science University, Portland, Ore