Author Disclosures: T. M. Beaver: Nothing to disclose; **A. W. Beck**: Cook Medical, Research Grants-Medtronic, Research GrantsMedtronic, Consulting fees or other remuneration (payment) Cook Medical, Consulting fees or other remuneration (payment); **R. J. Feezor**: Cook Medical, Research GrantsMedtronic Inc, Research GrantsCook Medical, Consulting fees or other remuneration (payment); **P. J. Hess**: Nothing to disclose; **T. S. Huber**: Nothing to disclose; **C. T. Klodell**: Nothing to disclose; **T. D. Martin**: Nothing to disclose; **S. T. Scali**: Nothing to disclose; **J. Zakko**: Nothing to disclose.

C6b: Poster Session-Aortic Disease (2)

PS20.

A Comparative Study of Open Versus Endovascular Repair of Inflammatory Abdominal Aortic Aneurysms

Stavros K. Kakkos[1], Konstantinos O. Papazoglou[2], Ioannis A. Tsolakis[1], George Lampropoulos[1], Spyros I. Papadoulas[1], Pavlos N. Antoniadis[3]. [1]University Hospital of Patras, Patras, Greece; [2]University of Thessaloniki, Thessaloniki, Greece; [3]Konstantopoulio Hospital, Athens, Greece

Objectives: Open repair (OR) of inflammatory abdominal aortic aneurysms (IAAA) is challenging due to adhesions of the aneurysm with the surrounding structures and can be associated with significant morbidity. In recent years endovascular aneurysm repair (EVAR) has emerged as a promising, less invasive approach, although there is a paucity of studies comparing directly these two methods of repair. The aim of our retrospective comparative investigation was to study IAAA outcome after OR compared to EVAR.

Methods: Twenty seven patients (26 males, median age 67 years) with a nonruptured IAAA were included. Mean (sd) IAAA size was 6.0 (1.3) cm. Preoperative pain was reported in 15 cases (56%). Nine patients were managed with EVAR under local (n = 8) or spinal anaesthesia (n = 1) and 18 with OR under general anaesthesia.

Results: Preoperative characteristics of the two study groups were comparable. In the EVAR group, transfusion needs were reduced by 67%, procedure duration was shortened by 58% and postoperative hospitalization was shortened by 4 days (50%), all statistically significant compared to OR (Table). A trend for reduced morbidity and in-hospital mortality after EVAR was also observed. No AAA-related death occurred during follow-up.

Conclusions: Endovascular repair of IAAAs, accomplished in a less invasive manner, is associated with a smoother postoperative course and shorter hospital stay compared to OR. Further studies should focus on the role of EVAR and provide long-term results, including total and aneurysm-related mortality.

Table. Results of endovascular and open repair of inflammatory abdominal aortic aneurysms

	Endovascular repair (n = 9)	*Open repair (n = 16)*	P *value*
Number of transfused RBC units [median (interquartile range)]	1.0 (0-1)	3.0 (2.0-5.0)	.001
Procedure duration [median (interquartile range)] (minutes)	70 (68-105)	240 (180-360)	.001
Postoperative hospitalization [median (interquartile range)] (days)	4.0 (2.5-7)	8.0 (6.5-11.5)	.004
Morbidity	11%	33%	.36[a]
In-hospital mortality	0%	11%	.54
Overall 5-year survival	100%	75%	.75

[a]Odds ratio 4.0.

Author Disclosures: P. N. Antoniadis: Nothing to disclose; **S. K. Kakkos**: Nothing to disclose; **G. Lampropoulos**: Nothing to disclose; **S. I. Papadoulas**: Nothing to disclose; **K. O. Papazoglou**: Nothing to disclose; **I. A. Tsolakis**: Nothing to disclose.

PS22.

Mid-Term Results and Morphological Neck Changes After EVAR in Patients With Severe Proximal Neck Angulation

Frederico M. Bastos Gonçalves[1], Herman J. Zandvoort[2], Joost A. van Herwaarden[2], Frans L. Moll[2], Debbie Werson[3], Jean-Paul M. de Vries[3], Hence J.M. Verhagen[1]. [1]Surgery, Erasmus Medical Center, Rotterdam, The Netherlands; [2]Utrecht University Medical Center, Utrecht, The Netherlands; [3]St. Antonius Hospital, Nieuwegein, The Netherlands

Objectives: We investigate the influence of severe proximal neck angulation on mid-term outcome using the Endurant Stentgraft.

Methods: A joint database of 3 tertiary institutions was inquired. Inclusion in the study group was: suprarenal neck angle (α) $>60^\circ$ or infrarenal neck angle (β) $>75^\circ$ (if neck length $\leq$10 mm, $\alpha > 45^\circ$ or $\beta > 60^\circ$). These were compared to a matched control group without significant angulation, treated in the same period with the same device. Primary endpoint was clinical success. 3D reconstruction was used for measurements. Neck changes over follow-up (FU) were evaluated. Estimates for clinical success were obtained from Kaplan-Meier plots.

Results: From 2008 to 2009, 232 patients were treated, and 45 were included in the study group (age 74 $\pm$ 8, 86% men). Mean α was $51^\circ \pm 21$ and β was $81^\circ \pm 16$. Median FU was 3.0 yrs (2.0-3.4). Compared to the control group (N = 65), no differences were found in clinical success ($P = .79$, Fig). Two post-EVAR ruptures occurred, one in each group. No differences were found in rate or type of reinterventions. Over FU, neck dilatation >2 mm occurred in 45% vs 43% in controls ($P = .23$),

despite similar oversizing. Mean angulation changes in the study group were α -16° ± 18 and β -29° ± 23.

Conclusions: Severe proximal neck angulation had no influence on mid-term results when using the Endurant endograft. Device conformability resulted in minor changes in neck angulation over time, possibly reducing the risk of complications.

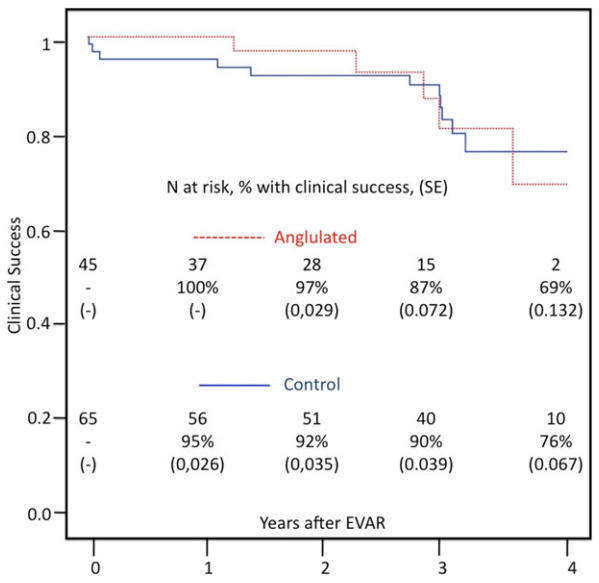

Fig.

Author Disclosures: F. M. Bastos Gonçalves: Nothing to disclose; **J. M. de Vries**: Nothing to disclose; **F. L. Moll**: Nothing to disclose; **J. A. van Herwaarden**: Medtronic AVE, Consulting fees or other remuneration (payment); **H. M. Verhagen**: Medtronic AVE, Consulting fees or other remuneration (payment); **D. Werson**: Nothing to disclose; **H. J. Zandvoort**: Nothing to disclose.

PS24.

Frailty Does Not Increase Risk in Thoracic Endovascular Aortic Repair

Matthew A. Schechter, Asvin M. Ganapathi, Brian R. Englum, Jennifer M. Hanna, Richard McCann, G. Chad Hughes. Duke University Medical Center-Department of Surgery, Durham, NC

Objectives: Frailty has been examined in various populations as a predictor of morbidity/mortality, but not in patients undergoing thoracic endovascular aortic repair (TEVAR). The objective of this study was to evaluate the role of frailty, as represented by total psoas volume (TPV), in predicting morbidity & mortality following TEVAR.

Methods: Retrospective analysis was performed on all patients undergoing TEVAR between 6/2005 and 10/2012 at a single referral institution. Risk models for 30-day and 1-year mortality, 30-day major morbidity, and discharge to a facility were calculated using logistic regression modeling. Major morbidity was defined as reoperation, prolonged mechanical ventilation, acute renal failure, new onset dialysis, stroke, discharge to a facility, and/or LOS >14 days.

Results: 383 patients were identified, with 338 (88%) having data points for all variables used in the final model. Mortality for the cohort at 30 days and 1 year was 7% (n = 23) and 19% (n = 62), respectively, while incidence of major morbidity was 33% (n = 108). TPV was not a statistical significant predictor of 30-day or 1-year outcomes. History of stroke and ASA class 4 were significant predictors of all outcomes except 30 day mortality, with which age, procedure type and nonelective status were statistically associated (Table).

Conclusions: Frailty, as determined by TPV, does not predict outcomes in TEVAR. An endovascular approach may reduce the effect of frailty on morbidity and mortality following TEVAR.

Author Disclosures: B. R. Englum: Nothing to disclose; **A. M. Ganapathi**: Nothing to disclose; **J. M. Hanna**: Nothing to disclose; **G. Hughes**: W.L. Gore, Consulting fees or other remuneration (payment) Vascutek Terumo, Consulting fees or other remuneration (payment); **R. McCann**: Nothing to disclose; **M. A. Schechter**: Nothing to disclose.

Table.

	30-day mortality	*30-day major morbidity*	*Discharge to facility*	*LOS > 14 days*	*1-year mortality*
	Odds ratio (P value)	*Odds ratio (P value)*	*Odds ratio (P value)*	*Odds ratio (P value)*	*Odds ratio (P value)*
Prior Stroke	NS	2.42 (.019)	2.35 (.045)	3.42 (.006)	3.07 (.005)
ASA Class 4	NS	3.49 (<.001)	3.04 (.002)	3.58 (.001)	2.17 (.013)
Maximal aortic diameter, cm	NS	NS	NS	NS	1.26 (.016)
Repair type descending-only	NS 7.33 (<.001)	NS 2.40 (.006)	NS 7.44 (<.001)	NS NS NS	NS 2.12 (.030) NS
hybrid arch hybrid thoracoabdominal	4.36 (.021)	3.83 (<.001)	5.05 (<.001)		
Nonelective status	2.87 (.045)	NS	2.88 (.013)	NS	NS
Increasing age	1.05 (.021)	NS	1.06 (<.001)	NS	1.03 (.005)
Increasing BMI	NS	NS	NS	NS	0.93 (.025)

ASA, American Society of Anesthesiologists; *BMI*, body mass index; *LOS*, length of stay; *NS*, nonsignificant.