

Author Disclosures: **J. D. Birkmeyer:** Nothing to disclose; **B. S. Brooke:** Nothing to disclose; **J. L. Cronenwett:** Nothing to disclose; **E. S. Fisher:** Nothing to disclose; **D. A. Goodman:** Nothing to disclose; **P. P. Goodney:** NIH, SVS, Research Grants; **P. K. Henke:** Nothing to disclose; **K. Holman:** Nothing to disclose; **L. L. Travis:** Nothing to disclose.

SS21.

Mechanochemical Ablation (MOCA) of the Great Saphenous Vein: Two-Year Results and Recommendations from the Initial Human Trial

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Objectives: The mechanochemical ablation catheter utilizes a liquid sclerosant (sodium tetradecyl sulfate or aethoxysclerol) and a mechanical rotating wire to accomplish occlusion of incompetent GSV or SSV. The procedure does not require tumescence and is performed with local anesthesia at the access site only. It can be characterized as mechanically enhanced sclerotherapy performed in an office setting.

Methods: 30 GSVs in 29 patients underwent micropuncture access with local anesthesia only in this first in man study. Through a 5 Fr. micropuncture sheath the MOCA catheter was passed to a position 2 cms. from the saphenofemoral junction. Catheter wire rotation was begun for 3 seconds at 3500 rpm. With the wire rotating, infusion of sclerosant (1.5% sodium tetradecyl sulfate) and catheter pull-back (1.5 mm./sec) was begun simultaneously. A total of 12 cc. of sclerosant was used for each GSV. The procedure does not require the instillation of tumescent anesthesia.

Results: At 1 year 29 of 30 GSV were successfully treated. Primary closure rate 96.7%. At 2 years 24 patients were examined. All 24 remain closed. No DVT, nerve or skin injury occurred. Average total procedure time was 14 minutes. Catheter treatment time was 5 minutes. The MOCA technique has been modified; lower volumes are now used based on diameter and length of vein treated. Catheter placement is closer to SFJ (1 cm.).

Conclusions: MOCA is as efficacious at 2 years as current endothermal techniques without the need of tumescent anesthesia and more effective than reported results of foam sclerotherapy of the GSV. It is another alternative modality for most incompetent GSVs and SSVs.

Author Disclosures: **S. Elias:** Covidien Inc., Consulting fees or other remuneration (payment) Vascular Insights LLC, Consulting fees or other remuneration (payment).

SS5: SVS Plenary Session V

SS22.

See One, Sim One, Do One, Teach One: Results of a Prospective Randomized Trial of Endovascular Skills Training for Surgical Residents

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Objectives: Surgical simulation has emerged as an important adjunct to residency training in the era of duty-hour work restrictions. We conducted a prospective randomized trial to determine whether an endovascular simulation-based curriculum improves the technical performance of surgical residents.

Methods: Third year residents rotating on vascular surgery were randomized to SIMULATION consisting of weekly faculty-mentored simulation-based sessions and compared to CONTROL without simulation. Endovascular skills were assessed pre- and post-rotation on a high-fidelity simulator utilizing a previously validated endovascular global assessment scale (score 1-5), and a live OR patient evaluation at the end of the rotation.

Results: From 2008-2011, 25 consecutive surgical residents (13 SIMULATION, 12 CONTROL) rotating on a university VS service were enrolled. PRE-test assessment was not different between groups documenting similar baseline skills (1.6 vs. 1.4), and operative exposure during their 8-week rotation was similar for open and endovascular cases. Amount of time reading, didactic teaching, and conference attendance was also similar between cohorts. There was significant improvement on the POST-test (3.6 vs. 1.5) assessed on the simulator for the entire group, with the residents assigned to the SIMULATION group outperforming the CONTROL group (4.0 vs. 3.3) on the simulator and in the live patient OR assessment (3.5 vs. 2.5).

Conclusions: Implementation of an intensive simulation-based endovascular curriculum during the VS rotation improved the technical skill of surgical residents on a high-fidelity simulator, and translated to improved live OR performance beyond the usual teaching obtained from standard clinical rotations.

Author Disclosures: **R. L. Dalman:** Nothing to disclose; **T. Krummel:** Nothing to disclose; **J. T. Lee:** Nothing to disclose; **A. Peruzzaro:** Nothing to disclose.

SS23.

Outcomes Comparison of HeRO and Lower-Extremity Arteriovenous Graft in Patients with Long-Standing Renal Failure

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Objectives: The HeRO (Hemodialysis Reliable Outflow) graft is becoming a recognized alternative to Lower Extremity AV Grafts (LEAVG) as an option for patients who have exhausted traditional upper extremity access; however it is unclear which should be applied preferentially.

Methods: A retrospective review of LEAVG and HeRO implants from January 2006 to August 2010 was performed. Patient demographics, medical history, procedural data and outcomes were evaluated.

Results: Within the time periods, 62 HeRO's were placed in 61 patients and 23 LEAVG were placed in 21 patients. Demographics were similar between the two groups for gender, age, BMI, and race. Average fol-