Nothing to disclose; S. Rowell: Nothing to disclose; R. Urankar: Nothing to disclose.

PS172.

Does Topical Wound Oxygen (TWO2) Offer an Improved Outcome Over Conventional Compression Dressings (CCD) in the Management of Refractory Non-healing Venous Ulcers (RVU)? Three-Year Technical and Clinical Outcome and Midterm Results With Quality-Adjusted Time Spent Without Symptoms of Disease and Toxicity of Treatment (Q-TWiST)

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Objectives: TWO2 proposes an option in the management of RVU. Primary endpoint is ulcer healing at 12 weeks and secondary endpoint is Q-TWiST.

Methods: 46 ulcers were managed using TWO2 therapy and 37 ulcers with CCD. Demographics and risk factors were similar in both groups. All ulcers were CEAP C6. s.

Results: The mean reduction in ulcer surface area at 12 weeks was 96% in the TWO2 therapy group, compared to 61% in the CCD group. At 12 weeks, 80% of TWO2 managed ulcers were completely healed, compared to 35% of CCD ulcers (p < 0.0001). Median time to full healing was 45 days in TWO2 patients and 182 days in CCD patients (p < 0.0001). 32/46 of TWO2 ulcers showed reverse gradient of healing. 9/19 MRSA positive ulcers managed with TWO2 were rendered MRSA negative after 5 weeks, compared to none of the 17 MRSA positive CCD ulcers. The pain score threshold in TWO2 managed patients improved from 8 to 3 by 13 days. Q-TWiST was significantly longer at 24.25 weeks was 96% in the TWO2 therapy group, compared to 10.5 months for CCD with p < 0.0001. After 36 months follow-up, 8 of the 13 healed CCD ulcers showed recurrence compared to none of the 37 TWO2 healed ulcers. No local or systemic complications were encountered in either treatment group.

Conclusions: TWO2 is prudent, effective and valuable in managing RVU up to 36 months and slashes time needed for RVU healing. TWO2 is successful in pain alleviation, MRSA elimination. TWO2 radically degrades recurrence rates and thus enhances the quality of life and has superior Q-TWiST over CCD.

Author Disclosures: S. Sultan: Nothing to disclose; W. Tawfick: Nothing to disclose.

PS174.

A Systematic Review on the Effectiveness of Knee Versus Thigh Length Graduated Compression Stockings in Thromboprophylaxis for Surgical Patients

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Objectives: To systematically analyze prospective randomized controlled trials on effectiveness of knee (KL) vs thigh length (TL) graduated compression stockings in thromboprophylaxis for surgical patients.

Methods: A systematic review of medical literature was undertaken. Prospective randomized controlled trials on postoperative patients of various surgical disciplines were selected according to specific criteria. Data was extracted and analyzed by using statistical package RevMan 5.0. Summated outcome was calculated in form of odds ratio (OR) with 95% confidence interval.

Results: Nine trials on 1476 patients were retrieved from electronic databases using standardized medical subject headings. Only three trials on 498 patients qualified for meta-analysis according to inclusion criteria. Both in fixed [OR, 1.35; 95% CI, 0.78 - 2.30; z = 1.25; p = 0.21] and random [OR, 1.35; 95% CI, 0.44 - 4.06; z = 0.51; p = 0.61] effects models, KL stockings were as effective as TL stockings for thromboprophylaxis in surgical patients. However, there was significant heterogeneity [Chi2 = 4.04, df = 2, 12 = 50 %] among trials.

Conclusions: KL graduated compression stockings may be as effective as TL stockings for the prevention of DVT in surgical patients. For thromboprophylaxis, in surgical patients KL stockings may routinely be used due to parallel efficacy, higher patient compliance and lower cost. However, a major randomized trial is required in order to strengthen the existing evidence.

Clinical Outcome Analyses of Radio-Frequency Ablation (RFA) in the Treatment of Incompetent Greater Saphenous Vein (GSV): Differences Between Closure-Plus and ClosureFast Catheters

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Objectives: The new ClosureFast (CF) catheter has much higher treatment speed as compared to previous ClosurePlus (CP) model. We compared several clinical outcomes after use of both catheters in a large series.

Methods: From February 2005 to April 2009 there were 656 consecutive office RFA procedures performed first with CP and later with CF catheters. Postoperative duplex scans (3-7 days) documented technical success (complete obliteration, partial obliteration or full patency
of GSV), DVT or SVT presence and loose attachment of proximal GSV thrombus.

Results: Loosely attached GSV thrombi were followed with weekly duplex scans; dissolving and attachment of thrombus end was observed within 1-3 weeks. No cases of pulmonary embolism occurred in this series. Close Plus catheter was used from February 2005-April 2007 in 329 cases in 399 patients. Close Fast was used from May 2007-April 2009 in 362 cases in 304 patients. One-week duplexes were available in 95% of each group. A completely obliterated GSV was noted in 275 (88%) with Close Plus and 337 (98%) with Close Fast \( (p < 0.0001) \). A completely patent GSV was noted in 25 (8%) (Close Plus) and 4 (1.2%) cases with Close Fast \( (p < 0.0001) \). DVT was noted 11 (3.5%) cases with Close Plus and 0 (0%) with Close Fast \( (p < 0.001) \). SVT was noted in 47 (15%) cases with Close Plus and 35 (10%) cases with Close Fast \( (p = 0.08) \). Loosely attached proximal thrombus was noted in 20 (6%) cases with Close Plus and in 25 (7%) cases with Close Fast \( (p = 0.8) \).

Conclusions: These data suggest the superiority of ClosureFast relative to the rate of successful GSV obliteration as well as the incidence of postoperative acute DVT. SVT continues to occur with similar frequency with both types of catheters but appears to be a self-limiting benign condition. Loose thrombus attachment within the proximal GSV is not associated with embolic complications and resolves within 4 weeks after an RFA procedure.

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PS178.

Value and Limitations of Repeat VNUS Closure of the GSV

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Objectives: Endovenous ablation has revolutionized the treatment of symptomatic GSV reflux. However, a small percentage of patients will undergo recanalization of the GSV after this procedure and have recurrence of symptoms. We reviewed our database of VNUS closures of the GSV performed at out institution from January 2005-march 2009 to examine the role of repeat VNUS closure for these patients.

Methods: VNUS closure was for symptomatic GSV reflux with reflux times > 500 milliseconds and diameter > 5mm of the entire GSV after an initial trial of compression. Of the 632 performed during this time period, 17 underwent repeat procedures for symptomatic recurrence due to recanalization of the GSV.

Results: Only four of these repeat GSV VNUS closure resulted in recanalization with severe recurrent venous reflux. 2 of these patients underwent stripping. Success of the second venous closure was not related to age or gender distribution, vein diameter, CEAP classification, h/o DVT of SVT, thrombotic complications after VNUS procedure, presence of absence of incompetent perforators, degree of deep venous insufficiency, time interval between procedures, time interval to recurrence of GSV insufficiency.

Conclusions: Based upon this limited dataset, we suggest that repeat VNUS closure can result in satisfactory results in many of these patients with symptomatic recanalization of the GSV.

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PS180.

The Role of Ultrasound to Identify Non-thrombotic Lower Extremity Pathology

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Objectives: Accreditation in peripheral venous testing can be obtained based upon femoropopliteal duplex ultrasound evaluation, and many laboratories limit their examination to this segment only. This simplified protocol detects acute femoropopliteal deep venous thrombosis (DVT) but misses calf vein DVT, superficial venous thrombosis, chronic DVT, venous reflux, and other non-venous findings potentially responsible of the patients’ presenting conditions. A protocol limited to the femoropopliteal segment results in additional unnecessary testing and can create patient dissatisfaction. We evaluated the differences in the diagnosis between a limited femoropopliteal vs a complete approach to the venous ultrasound evaluation of the lower extremities in patients examined in an outpatient vascular laboratory.

Methods: A data base with the complete ultrasound exams of the lower extremity including the common femoral, deep femoral, popliteal, tibial and peroneal veins, calf muscular veins, great and lesser saphenous veins performed in 167 consecutive patients from July 2009 was queried.

Results: Acute femoropopliteal DVT was found in 9% of the patients. Acute infrapopliteal DVT was found in 2%. Chronic femoropopliteal DVT was found in 7%. Acute infrapopliteal DVT was encountered in 2%. Acute superficial thrombophlebitis was encountered in 10% and chronic SVT in 4%. In addition, deep venous insufficiency (>500 milliseconds) was found in 44% and superficial venous insufficiency in 24 % (>500 milliseconds). A mass (cyst, hematoma, solid mass or aneurysm) was found in 9%.

Conclusions: Limited femoropopliteal ultrasound examination for acute DVT would have only detected 7.8 % of the positive findings. These data suggest that the duplex