Median duration of negative pressure wound therapy was 36 days (Interquartile range [IQR] 19-—62) with a median pressure of 75 (IQR 62—125) mm Hg. The NWPT system was changed 10 times (SD 9.4) in each patient yielding 506 microbiological samples. In 55 patients deep wound cultures could be compared to cultures from the negative pressure wound therapy foams. Sensitivity, specificity, PPV and NPV for bacteria retrieved from negative pressure wound therapy foams compared to deep wound cultures as gold standard were 67%, 56%, 65%, and 58%, respectively (Table 1).

Conclusion: Antimicrobial therapy should primarily focus on deep wound cultures, whereas bacteria obtained from NWPT foams seem to be less important.

Endovenous Laser Ablation in Patients with Venous Ulcers: Long Term Results and Risk Factors for Non-healing or Recurrence

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Introduction: The ESCHAR study showed that superficial venous surgery reduced the recurrence rate compared with compression therapy only. Ulcer recurrence rates after endovenous laser (EVL) treatment for superficial venous insufficiency seem comparable, but so far only small groups and shorter follow up times have been reported. The aim of this study was to investigate long term treatment outcomes of patients with venous ulcers treated with EVL in a larger population, in ordinary clinical practice without dedicated ulcer care.

Methods: One hundred and ninety seven consecutive patients previously treated with EVL for a healed or open venous ulcer were invited to follow up including clinical examination, quality of life score using EQ5D, Duplex, ankle brachial index, venous refilling time (RT) and pump volume measured with PPG. Risk factors for non-healing and/or recurrence were calculated using chi-square to compare proportions and logistic regression.

Results: 197 patients have been examined after a mean follow up time of 41 months. After EVL further ulcer treatment and compression was carried out mostly in primary care. Details of post-operative treatment were not possible to retrieve. 165 patients had healed ulcers (Group 1) without recurrence during follow up, 32 patients never healed or had a recurrence after EVL (Group 2). The mean age was 62.7 years for group 1 and 64,2 for group 2 (NS). The number of women/men was 99/66 in group 1 and 14/18 in group 2 (NS). Significant risk factors for non-healing and or recurrence were reduced ankle mobility ($p = .009$), perforating vein insufficiency (PVI) in the ulcer area ($p = .007$), popliteal and crural vein insufficiency ($p = .016$ and .000 respectively) and shortened RT ($p = .016$).

There was a greater proportion in group 2 with previous deep venous thrombosis, diabetes, remnant varicose veins (VV) in ulcer area, and they had lower QoL, but no significance was reached. Other non-significant risk factors were cardiovascular disease, previous VV surgery, smoking, C5 or C6 at EVL, skin disease and remnant VV outside ulcer area.

Conclusion: Endovenous laser ablation treating patients with venous ulcers in ordinary clinical practice confers long-term healing in a majority. Non-healing and recurrence was associated with reduced ankle mobility, deep and perforating vein insufficiency and shortened RT. It may be speculated that healing rates can be further improved with a more dedicated ulcer care and follow up post-operatively.

The Role of 3D Fusion Computed Tomography in the Enhancement of the Safety Profile of FEVAR.

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Introduction: Fenestrated endovascular aneurysm repair (FEVAR) has revolutionized the management of complex aortic aneurysms; however the procedure exposes operators and patients to more radiation than conventional open surgery. Three dimensional (3D) fusion computed tomography (CT) imaging is a new technology that may reduce radiation and facilitate faster repair. The primary aim of this study was to evaluate the radiation dose effect of introducing fusion imaging techniques to an expert team.

Methods: Procedural details were gathered prospectively for a cohort of 18 consecutive patients receiving fusion-guided (Fusion Group) FEVAR and compared with 21 patients treated in the immediate 12 months prior to the implementation of routine fusion imaging (Standard Group) at a centre with established expertise in FEVAR. Data distributions were found to be non-Gaussian, so non-parametric tests were used to compare procedure time (PT), radiation dose, dose-area product (DAP), fluoroscopy time (FT), estimated blood loss (EBL) and pre- and post-operative estimated glomerular filtration rate (eGFR) between the groups.

Results: There were 18 and 21 patients in the Fusion and Standard groups, respectively. The Fusion group received three 2 vessel-, ten 3 vessel-, four 4 vessel-, and one single vessel- fenestrated graft(s). The Standard group received five 4 vessel-, eleven 3 vessel-, four 2 vessel-, and one single-vessel graft(s). There was a significant reduction in PT for the Fusion group (median 285 min; interquartile range 265 —323) compared with the Standard group (420 min; IQR 330 —310 $p = <0.001$). There were significant reductions in radiation skin dose for the Fusion group (1.65 Gy; IQR 1.22—2.22) compared with the Standard group (4.39 Gy; 3.28—7.05 $p = <0.001$), and DAP; Fusion (173.64 Gy cm2^2; IQR 138.33 —232.77) vs. (264.93 Gy cm2^2; 173.37—366.85) for Standard ($p = 0.001$). Estimated blood loss was significantly reduced for Fusion (350 ml; 250—560) compared with Standard (1000 ml; 420—2300- $p = 0.01$). There were no significant differences in FT, and pre- and post-operative eGFR between the two groups. Weight and height were distributed equally across both groups.

Conclusion: Implementation of fusion imaging by a team with expertise in complex endovascular aneurysm repair significantly reduces radiation dose and other performance measures. A further unexpected benefit was significant reduction in operative blood loss probably secondary to the significantly shorter procedure time. These findings suggest that fusion imaging improves the overall safety profile of FEVAR for both patients and experienced providers.