**P 1. SEEK AND YOU SHALL FIND: IS ROUTINE D UPLEX UL TRASOUND SCREENING FOR DEEP VEIN THROMBOSIS IN TRAUMA WARRANTED?**

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**Introduction:** Previous studies have documented that routine duplex ultrasound screening (RDUS) has been effective in diagnosing deep venous thromboses (DVT) in high-risk asymptomatic trauma patients and may decrease the incidence of subsequent pulmonary emboli (PE). Therefore, we sought to determine if RDUS in all trauma patients would be as effective in diagnosing DVT and reducing subsequent PE.

**Methods:** Prospective data were collected and retrospectively reviewed on 13,111 critically injured patients over a 5 year period from 2014-2018. Patients were stratified by age, gender, injury severity score (ISS), Glasgow Coma Score (GCS), body mass index (BMI), presence of cancer and use of RDUS to diagnose DVT. Patients were divided into two groups, those that received weekly RDUS and those that did not. Multivariate regression analyses assessed RDUS and demographic variables as independent risk factors for mortality, hospital length of stay (HLOS) and development of DVT and PE.

**Results:** Mean age of the study cohort was 45 ± 25, mean ISS was 11 ± 9, mean GCS was 13 ± 3, 63% were male. Venous thrombosis rate was 1.6% (1% DVTs and 0.8% PE). Patients receiving RDUS were significantly younger (44.5 ± 24.4 vs 46.4 ± 25.9, p < 0.001), more often male (64% vs 61%, p < 0.001), more severely injured (12.2 ± 9.4 vs 10.2 ± 9.1, < 0.001), had a decreased GCS (13.7 ± 3.3 vs. 14.0 ± 3.0, p < 0.001), were more likely to have cancer (3.3% vs 0.4%, < 0.0001) compared to those that did not received RDUS. In addition, patients receiving RDUS had significantly increased HLOS (7.3 ± 12.7 vs 5.9 ± 8.6, p < 0.0001), VTE (2.3% vs. 0.7%, < 0.0001), DVT (1.6% vs. 0.3%, p < 0.0001) PE (1.0% vs. 0.5%, P < 0.0001) and mortality rates (5.8% vs. 3.9%, p < 0.0001) compared to those that did not received RDUS. Multivariate regression analysis revealed increasing age, injury severity, BMI and decreasing GCS as significant risk factors in the development of DVT and PE, increased HLOS and mortality (p < 0.001). In addition, multivariate regression analysis revealed RDUS as a significant risk factor for the development of DVT, PE, increased HLOS and mortality (p < 0.0001).

**Conclusion:** RDUS is a significant risk factor in the identification of DVT, PE, increased HLOS and mortality. Additional studies are warranted to determine the cause for increased PE and mortality rates in patients receiving RDUS.