A Retrospective Study of Outcomes In a Rural Pediatric Population Treated For Venous Insufficiency

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PURPOSE

- To review the management of pediatric patients with venous insufficiency.
- To evaluate the outcomes, and determine the efficacy, convenience, and safety of ablation procedures in an outpatient setting.

METHODS

- A retrospective chart review of all patients seen at six locations from 2013-2024 was completed.
- Patients who were diagnosed with venous insufficiency and had onset of symptoms before the age of 21 were included in this study.
- The data points collected were patient's sex, body mass index (BMI), age of onset of symptoms, past medical history, smoking status, presence of leg symptoms, risk factors for deep vein thrombosis, (DVT),CEAP scores, ultrasound results and post-treatment complications.
- Ultrasound results included vein size, reflux time, and the presence of DVT if seen.
- QuickCalcs by GraphPad was used to conduct data analysis.
- An Analysis of Variance (ANOVA) was performed to determine if there were statistically significant differences in the relationship between sex and BMI.

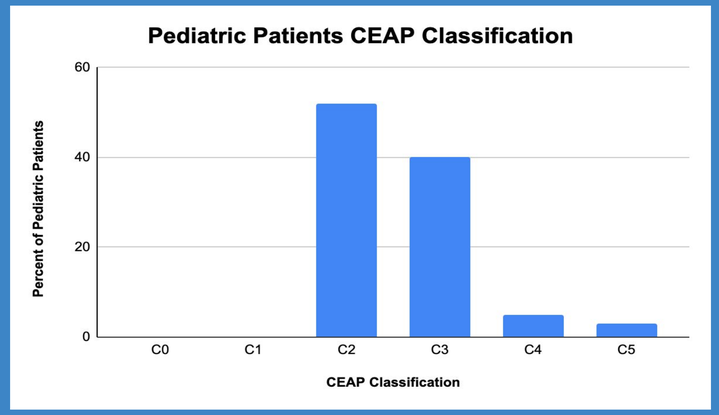


Figure 1: Pediatric Patients CEAP Classification

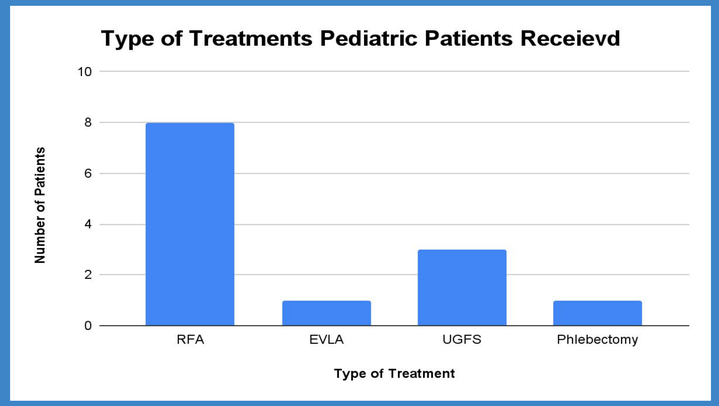


Figure 2: Type of Treatments Pediatric Patients Received for CVI

REFERENCES

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RESULTS

- There were a total of 34 patients- ten males (29.5%) and twenty- four females (70.5%).
- The average age of onset of symptoms reported by the patients was 16.7 years ± 2.75 years, ranging from 13-21 years (males= 15.7 ± 1.02 years and females= 16.25 ± 2.73 years).
- Most of the pediatric patients had CEAP scores above C2.
- Only 16 patients met the criteria for treatment and 13 (81%) received the treatment.
- RFA or EVLA treatment was done for eight limbs, sclerotherapy for three limbs, and phlebectomy for one limb.
- Females were more likely to have venous insufficiency in both legs than males ($p=0.04$).
- As compared to female patients, males were more likely to receive treatments regarding their diagnosis ($p<0.05$).
- No relationship was identified between CEAP score and vein size; CEAP and reflux time; obesity and disease severity or vein size;age and disease severity, vein size, or reflux time.

CONCLUSION

- Outpatient ablation procedures (RFA or EVLA) proved to be a safe and effective method for the treatment of venous insufficiency in pediatric patient population.
- Female pediatric patients with venous insufficiency symptoms should be recommended to have a careful evaluation of both extremities for venous diseases.