Combined Preoperative Sclerotherapy and Surgical Excision of Upper and Lower Extremity Venous Vascular Malformations: Representative Case Series and Review of the Literature

Background: Venous vascular malformations (VVMs) are the most common type of congenital vascular malformation. They present at birth and grow proportionally with the child. Treatment options include direct excision, sclerotherapy, and combined approaches. While some patients may prefer a “less invasive” injection over direct surgical excision, a direct comparison between the two modalities may provide further insight into decision making.

Methods: A retrospective chart review was conducted to assess the outcomes of 18 patients who received combined preoperative sclerotherapy and direct excision to treat their upper or lower extremity VVM. Common VVM complications were recorded, along with degree of symptom relief, hospital stay length, and time to recurrence.

Results: 18 patients underwent combined sclerotherapy and surgical excision between 2017 and 2021; these patients received a total of 45 procedures over their treatment courses. Two minor complications were seen: one case of dehiscence with a small white necrotic eschar and one case of macerated skin with mild cellulitis. 10 patients experienced complete resolution after combined surgical therapy. Of the 5 patients who experienced partial resolution, 3 received laser touch-ups after combined therapy, complete resolution was obtained in 2 of these 3 patients with no additional complications.

Conclusion: Combined sclerotherapy surgical excision may be more effective than repeated sclerotherapy injections for achieving asymptomatic status in upper and lower extremity VVMs with less hospital visits and an overall shorter recovery time, while maintaining low complication rates.