E-021 CLINICAL OUTCOMES, IMAGING OUTCOMES, AND SAFETY OF SCLEROTHERAPY FOR SUPERFICIAL VENOUS MALFORMATIONS INVOLVING THE SCALP

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Purpose To evaluate the safety and outcomes of sclerotherapy for venous malformations (VMs) involving the scalp.

Materials and Methods After IRB approval, we reviewed patients who received sclerotherapy for VMs involving the scalp between 1/2003 and 11/2021. The patient chart was evaluated to assess changes in clinical response, lesion size changes, and complication rates. Clinical symptoms response was classified as resolved, improved, and stable or worsened. VM size change was calculated using the difference between pre and post-procedure MRI of the largest lesion diameter in one plane and classified as complete response (CR, 100% reduction), partial response (PR, >30% reduction), stable disease (SD, <30% reduction and <20% enlargement), or progressive disease (PD, >20% enlargement). SIR classification criteria were used to classify adverse events. Fisher’s Exact Test was used for statistical analysis.

Results 15 patients (73.3% Females) underwent a total of 55 embolization procedures with a median follow-up period of 88 days (20–6598). Patients commonly presented with complaints of pain (10/15, 66.7%), followed by enlargement (5/15, 33.3%), cosmetic deformity (4/15, 26.7%), discoloration (1/15, 6.7%) and stiffness (1/15, 6.7%). Patients underwent a median of 2 procedures (Range: 1–14) procedures with a technical success rate of 98.2% (54/55). Ethanol (25/55; 45.5%) was the most commonly used sclerosant, followed by bleomycin foam (21/55; 38.2%), sotradecol foam (10/55; 18.2%), n-BCA (3/55; 5.5%), and onyx (2/55; 3.6%) with some procedures using more than one agent. Sclerotherapy significantly improved clinical symptoms with 53.3% patients showing improvement (8/15), 46.7% patients showing no change or worsening (7/15), and zero patients showing complete resolution of symptoms (p = 0.002). Sclerotherapy was not significantly associated with a lesion size reduction on imaging (p = 0.21). Of the 9 (60%) patients with both pre-and post- MRI imaging measurements, 5 patients (55.6%) demonstrated SD, 3 patients (33.3%) demonstrated a PR, 1 patient (11.1%) demonstrated PD, and zero patients demonstrate a CR. Early (30 days) post-procedural complications occurred after 5 of 55 procedures (9.1%), all of which were skin burns of different severity (4 Mild, 1 Severe).

Conclusion Percutaneous sclerotherapy is a safe and effective treatment for VMs involving the scalp. Patients undergoing the procedure showed significant improvement in clinical symptoms without a significant reduction in lesion size.