

TRENDS IN PROCEDURALLY-MANAGED INFANTILE HEMANGIOMAS OF THE FACE: A SINGLE-CENTER RETROSPECTIVE STUDY

Burns, Heather R¹, Andrew M Ferry², Matthew J Parham², Andrew E Grush², Renata S Maricevich²

¹ Baylor College of Medicine, Department of Surgery, Plastic Surgery

² Texas Children's Hospital, Surgery, Plastic Surgery

Keywords: Infantile Hemangioma; Plastic Surgery; Lasers; Tissue Rearrangement

Background: The purpose of this retrospective study is to assess clinical trends of infantile hemangiomas (IHs) of the face that were treated with surgical and non-surgical procedures at our institution.

Materials/Methods: A retrospective chart review of all patients with hemangiomas treated with surgical or non-surgical procedures at our institution from 11/1/2011-11/1/2020 was performed. Patients with hemangiomas proven to be an IH on biopsy or had a characteristic clinical history were included for analysis. Patients without preprocedural photography were excluded. Variables analyzed for this study included patient age, lesion location, type of intervention, and rationale for undergoing procedural intervention.

Results: Of 137 patients identified on chart review, 52 patients with 53 IHs met our study's inclusion criteria. IHs most frequently involved the scalp/forehead (26.4%), the cheek (18.9%), and the nose (13.2%). A total of 35 (67.3%) patients included in our study were treated with topical and/or oral beta-blockers for their IH; however, only 8.6% of said patients were initiated on their pharmacotherapy regimen prior to 8-weeks of age. The average age of patients undergoing their first procedure was 41.8 months old. The majority of IHs were exclusively treated with surgical (50.9%) or non-surgical (35.8%) procedures with the latter most commonly being pulsed-dye laser treatments and intralesional Kenalog injections. Of patients included in our cohort, 39 (73.6%) IHs were procedurally managed for cosmetic reasons with incomplete involution accounting for 87.2% of these lesions. Conversely, 14 (24.6%) IHs were operated on due to complications, with ulceration and visual obstruction accounting for 42.9% and 28.6% of said lesions, respectively.

Conclusions: Children with IHs of the face that were treated with procedural intervention(s) at our institution were most frequently treated for aesthetic reasons and had delayed initiation of pharmacotherapy. Early initiation of pharmacotherapy along with multicenter outcomes studies are needed to improve outcomes moving forward.

Images / Graph / Table

| Facial Region | Number of Lesions (%) | Average Age of First Procedure (months) | Surgical Intervention Only (%) | Non-Surgical Intervention Only (%) | Both Surgical and Non-surgical Intervention (%) |
|----------------------------|-----------------------|-----------------------------------------|--------------------------------|------------------------------------|-------------------------------------------------|
| Cheek | 7 (13.2%) | 46 | 4 (57.1%) | 3 (42.9%) | 0 (0%) |
| Chin | 1 (1.9%) | 33 | 1 (100%) | 0 (0%) | 0 (0%) |
| Ear | 5 (9.4%) | 62 | 2 (40.0%) | 2 (40.0%) | 1 (20%) |
| Forehead/Scalp | 14 (26.4%) | 31 | 11 (78.6%) | 3 (21.4%) | 0 (0%) |
| Intraconal | 2 (3.8%) | 3 | 0 (0.0%) | 1 (50.0%) | 1 (50.0%) |
| Nasal | 6 (11.3%) | 46 | 2 (33.3%) | 2 (33.3%) | 2 (33.3%) |
| Neck | 4 (7.6%) | 25 | 2 (50.0%) | 1 (25.0%) | 1 (25.0%) |
| Perioral | 5 (9.4%) | 40 | 3 (60.0%) | 2 (40.0%) | 0 (0%) |
| Periorbital | 4 (7.6%) | 39 | 2 (50.0%) | 2 (50.0%) | 0 (0%) |
| Multiregional (n=5) | | | | | |
| Beard Distribution | 2 (3.8%) | 41 | 0 (0%) | 1 (50.0%) | 1 (50.0%) |
| Cheek/Lower Eyelid | 1 (1.9%) | 54 | 0 (0%) | 1 (100%) | 0 (0%) |
| Cheek/Nasal/Lower Eyelid | 1 (1.9%) | 72 | 0 (0%) | 1 (100%) | 0 (0%) |
| Neck/Cheek | 1 (1.9%) | 113 | 0 (0%) | 0 (0%) | 1 (100%) |
| Total | 53 (100%) | 41 | 27 (50.9%) | 19 (35.8%) | 7 (13.2%) |