

Clinical profile of Infantile Haemangioma and its response to propranolol therapy

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INTRODUCTION

Infantile hemangioma (IH) is the **most common benign vascular tumor of infancy**, affecting up to 10% of infants, with higher prevalence in **females** and in American and European populations. It appears at **birth or within the first weeks of life**, undergoes a rapid growth phase for 5–9 months, followed by stabilization and spontaneous involution by around 4 years of age. Most cases resolve without treatment, but intervention is required when complications occur. Diagnosis is mainly clinical, supported by Color Doppler Ultrasound. Since 2008, **propranolol has become the first-line treatment**, yet variability exists in clinical and radiologic responses

METHODS

- This **prospective observational study** was conducted over 12 months in the Dermatology Department of Maulana Azad Medical College and associated hospitals. **Fourteen infants** with clinically diagnosed IH requiring systemic therapy were enrolled after informed consent.
- Baseline assessment included clinical history, examination, photographs, and laboratory tests (CBC, RBS, TFT, LFT, KFT), along with ECG and echocardiography.
- **Color Doppler ultrasonography was performed at baseline and at 1, 2 and 3 months** to measure lesion volume, dimensions, and vascularity. Abdominal ultrasonography and MRI were done when indicated.
- Propranolol was initiated at 1–2 mg/kg/day (dose adjusted for PHACES risk) with monitored escalation. Treatment response was evaluated using the **Hemangioma Activity Score (HAS) and Hemangioma Severity Scale (HSS), correlated with ultrasonographic findings.**

RESULTS

The mean age at presentation was **4.86 months**, with a **female predominance**. Most hemangiomas were located on the **head and neck** and were primarily deep lesions. Ulceration and tenderness were the most common complications. Propranolol therapy led to significant improvement, **with HAS decreasing from 4.82 to 3.14 over 3 months, alongside a parallel decline in HSS. Ultrasonography showed substantial reduction in lesion volume, length, and vascularity.** Clinical and radiologic responses were strongly correlated. No major effects were noted.

★ This scatter diagram (Figure 16) shows change in HAS to change in volume which shows **positive correlation between both, which is statistically significant with p value < 0.002.**

CONCLUSION

Fourteen infants (mean age 4.86 months) were studied, with most lesions appearing neonatally, commonly **deep** in type, and predominantly affecting the head and neck. Over three months, significant reductions were observed in hemangioma activity score, severity score, lesion dimensions, volume, and vascularity. Clinical improvement showed a strong, statistically significant correlation with Doppler-measured volume reduction, supporting the role of color Doppler ultrasound in monitoring treatment response,

Limitations : Small sample size

Limited time to study only 3 months

No control group

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