



## Infant with red eyelid lesion

The rapid growth of this lesion provided an important clue in the diagnosis.

A 4-MONTH-OLD HISPANIC INFANT was brought to her pediatrician by her parents for evaluation of a dark red lesion over her right eyelid. The mother said that the lesion appeared when the child was 4 weeks old and started as a small red dot. As the baby grew, so did the red dot. The mother said the lesion appeared redder and darker when the baby got fussy and cried. The mother noted that some of the child's eyelashes on the affected eyelid had fallen out. The infant was still able to use her eyes to follow the movements of her parents and siblings.

The mother denied any complications during pregnancy and delivered the child vaginally. No one else in the family had a similar lesion. When asked, the mother said that when her daughter was born, she was missing hair on her scalp and had dark spots on her lower backside. The mother had taken the baby to

all wellness checks. The child was up to date on her vaccines, had no known drug allergies, and was otherwise healthy.

The pediatrician referred the baby to our skin clinic for further evaluation and treatment of the right eyelid lesion. Skin examination showed a 2.1-cm focal/localized, vascular, violaceous/dark red plaque over the right upper eyelid with an irregular border causing mild drooping of the right eyelid and some missing eyelashes (FIGURE 1). Multiple hyperpigmented patches on the upper and lower back were clinically consistent with Mongolian spots. Hair thinning was observed on the posterior and left posterior scalp.

- WHAT IS YOUR DIAGNOSIS?
- HOW WOULD YOU TREAT THIS PATIENT?

FIGURE 1

As this 4-month-old infant grew, so did the lesion



IMAGE COURTESY OF JIMENA G. CERVANTES, MD

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*The authors reported no potential conflict of interest relevant to this article.*

doi: 10.12788/jfp.0549

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**Diagnosis:**  
**Infantile hemangioma**

The diagnosis of an infantile hemangioma was made clinically, based on the lesion’s appearance and when it became noticeable (during the child’s first few weeks of life).

Infantile hemangiomas are the most common benign tumors of infancy, and the majority are not present at birth.<sup>1,2</sup> Infantile periocular hemangioma, which our patient had, is typically unilateral and involves the upper eyelid.<sup>1</sup> Infantile hemangiomas appear in the first few weeks of life with an area of pallor and later a faint red patch, which the mother first noted in our patient. Lesions grow rapidly in the first 3 to 6 months.<sup>2</sup> Superficial lesions appear as bright red papules or patches that may have a flat or rough surface and are sharply demarcated, while deep lesions tend to be bluish and dome shaped.<sup>1,2</sup>

Infantile hemangiomas continue to grow until 9 to 12 months of age, at which time the growth rate slows to parallel the growth of the child. Involution typically begins by the time the child is 1 year old. Most infantile hemangiomas do not improve significantly after 3.5 years of age.<sup>3</sup>

**Differential includes congenital hemangiomas, pyogenic granulomas**

Clinical presentation, histology, and lesion evolution distinguish infantile hemangioma from other diagnoses, notably the following:

■ **Congenital hemangiomas (CH)** are fully formed vascular tumors present at birth; they occur less frequently than infantile hemangiomas. CHs are divided into 2 categories: rapidly involuting CHs and noninvoluting CHs.<sup>4</sup>

■ **Pyogenic granulomas** are usually small (< 1 cm), sessile or pedunculated red papules or nodules. They are friable, bleed easily, and grow rapidly.

■ **Capillary malformations** can manifest at birth as flat, red/purple, cutaneous patches with irregular borders that are painless and can spontaneously bleed; they can be found in any part of the body but mainly occur in the cervicofacial area.<sup>5</sup> Capillary malformations are commonly known as *stork bites* on the nape of the neck or *angel kisses* if found on the forehead. Lateral lesions, known as *port wine*

*stains*, persist and do not resolve without treatment.<sup>5</sup>

■ **Tufted angioma and kaposiform hemangioendothelioma** manifest as expanding ecchymotic firm masses with purpura and accompanying lymphedema.<sup>4</sup> Magnetic resonance imaging, including magnetic resonance angiography, is recommended for management and treatment.<sup>4</sup>

■ **Venous malformations** can be noted at birth as a dark blue or purple discoloration and manifest as a deep mass.<sup>5</sup> Venous malformations grow with the patient and have a rapid growth phase during puberty, pregnancy, or traumatic injury.<sup>5</sup>

■ **Arteriovenous malformations (AVMs)** may be present at birth as a slight blush hypervascular lesion. AVMs can be quiescent for many years and grow with the patient. AVMs have a palpable warmth, pulse, or thrill due to high vascular flow.<sup>5</sup>

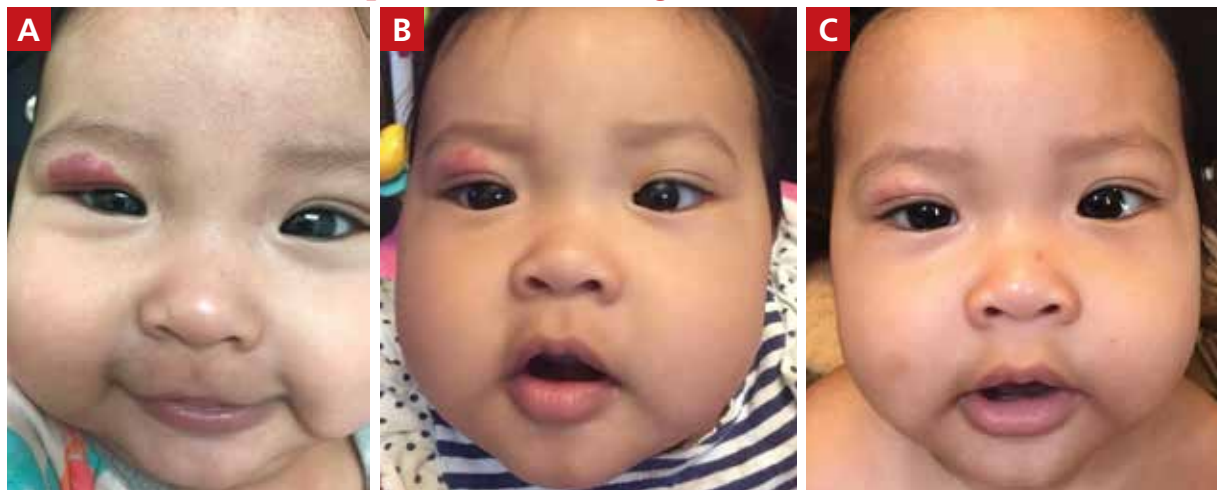
**Individualize treatment when it’s needed**

The majority of infantile hemangiomas do not require treatment because they can resolve spontaneously over time.<sup>2</sup> That said, children with periocular infantile hemangiomas may require treatment because the lesions may result in amblyopia and visual impairment if not properly treated.<sup>6</sup> Treatment should be individualized, depending on the size, rate of growth, morphology, number, and location of the lesions; existing or potential complications; benefits and adverse events associated with the treatment; age of the patient; level of parental concern; and the physician’s comfort level with the various treatment options.

Predictive factors for ocular complications in patients with periocular infantile hemangiomas are diameter > 1 cm, a deep component, and upper eyelid involvement. Patients at risk for ocular complications should be promptly referred to an ophthalmologist, and treatment should be strongly considered.<sup>6</sup> Currently, oral propranolol is the treatment of choice for high-risk and complicated infantile hemangiomas.<sup>2</sup> This is a very safe treatment. Only rarely do the following adverse effects occur: bronchospasm, bradycardia, hypotension, nightmares, cold hands, and hypoglycemia. If these adverse effects do occur, they are

FIGURE 2

## Resolution of infantile periocular hemangioma with treatment



Lesion resolution after 1 month (A), 5 months (B), and 7 months (C) of a propranolol regimen.

reversible with discontinuation of propranolol. Hypoglycemia can be prevented by giving propranolol during or right after feeding.

■ **Our patient** was started on propranolol 1 mg/kg/d for 1 month. The medication was administered by syringe for precise measurement. After the initial dose was tolerated, this was increased to 2 mg/kg/d for 1 month, then continued sequentially another month on 2.5 mg/kg/d, 2 months on 3 mg/kg/d, and finally 2 months on 3.4 mg/kg/d. All doses were divided twice per day between feedings.

After 7 months of total treatment time (FIGURE 2), we began titrating down the patient's dose over the next several months. After 3 months, treatment was stopped alto-

gether. At the time treatment was completed, only a faint pink blush remained. **JFP**

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