

## CONSERVATIVE TREATMENT OF CAVERNOUS HEMANGIOMA ON EYELIDS

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### ABSTRACT

Cavernous Hemangiomas on the eyelids are congenital benign tumors in children. They vary in size and shape, and present medical and cosmetic problems. Different methods of treatment have been used with different outcomes, but treatment with intralesional corticosteroids remain among the most commonly used.

A 3-month-old boy with hemangioma on the right upper eyelid is presented. He was successfully treated with repeated injection of betamethasone (celestone) in the lesion for a period of four years. At the end of the third year, the aesthetic result and regression of the tumor were significant.

This case and our experience show that intralesional steroid is an efficient therapy for eyelid hemangioma even during spontaneous regression.

**Keywords:** hemangioma; corticosteroids; intralesional therapy

Cavernous hemangioma on the eyelid is the most common congenital benign tumor in children. It is characterized by a unique history of growth in early infancy. In some cases this proliferative phase is followed by spontaneous involution. However, treatment is necessary in 10% to 20% of cases because of their location, size, or behavior of the tumor. Different methods, including cryotherapy, surgical excision, interferons and laser therapy have been used with different outcomes, but applying high dose systemic or intralesional injection of steroid is usually the first line treatment. [1,4]

The aim of this report is to assess the clinical effect of intralesional application of corticosteroids in treatment of hemangioma on the eyelids.

### Case report:

A 3-month-old boy with cavernous hemangioma on the eyelid was presented to the ophthalmological outpatient clinic. Physical examination revealed a large hemangioma on the right upper eyelid measuring 35x25mm and a few smaller satellite hemangiomas, which caused mechanical ptosis of the same eyelid. (**Figure 1**)



**Figure1:** Hemangioma before treatment

Treatment was initiated with 4mg/1ml of Betamethasone (Celeston) injected into the central and satellite lesions every six months, for a period of four years, with a close follow-up and photo documentation. The procedure required general anesthesia and repeated injections of long acting steroid in the tumor. Intralesional application aimed to locate the drug effect and to minimize the side systemic effects. (**Figure 2**)



**Figure 2:** The procedure of intralesional injection of corticosteroid

The involution of tumor lesions started at the end of second year and at the end of third year the aesthetic result and regression were significant. **(Figure 3)**



**Figure 3:** Result after two years of treatment

**DISCUSSION:**

Hemangioma is a benign tumor in infancy. The hallmark of this lesion is a rapid growth during the neonatal period. Most hemangiomas do not require treatment, as these resolve spontaneously. Batta et al. reported that among 121 infants with early hemangioma, about 40% cleared completely or left a minimal residual sign at the age of 1 year without treatment. Nevertheless, some complications or aesthetic concerns are indications for therapy. A number of treatment modalities – cryotherapy, radiation, laser therapy,

corticosteroids - have been proposed for treating hemangioma, but the choice of treatment depend on a careful assessment of every case.[4,6,8]

Corticosteroid therapy (intralesional application) has been proposed as the most efficient for cutaneous hemangioma, particularly for those involving the eyelids [2,3,5].

Reported complications including occlusion of the central retinal artery, eyelid necrosis and optic nerve neuropathy are rare.[2]

We injected Betamethasone (Celeston) into the central and satellite lesions every six months, for a period of four years. During this period no side effects were observed.

The therapy was initiated at the age of 3 months. After one year of treatment the size of the tumor was unchanged, therefore the lesion would not regress without therapy.

As it is difficult to predict accurately the duration of growth and the rate of spontaneous involution, the treatment should be initiated as early as possible, and the infant should be seen frequently.



**Figure 4:** Result after three years of treatment

This case clearly demonstrates the positive results of using intralesional steroids. **(Figure 4)** The ophthalmic literature shows that local application is generally preferred over the oral route for eyelid lesions.[7]

In conclusion, the best approach in management of hemangioma should be individualized according to the age of patient, location, size of the lesion, and presence of complications. Once the decision to treat hemangioma

is made, the main issues are the choice of the most appropriate time and method of treatment. According to the literature and our experience, the corticosteroids remain the mainstay of therapy for massive eyelid hemangioma. In addition, early steroid therapy is associated with better results. [8]

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