Case Report

HAEMANGIOMA ON EYELID IN CHILD - A CASE REPORT

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Summary

Cavernous haemangiomas on the eyelids are congenital benign tumors in children. They vary in size and shape, and present as both medical and cosmetic problems. Various methods of treatment have been used with a different outcome but intralesional corticosteroids has remained among the most commonly used treatments.
A 3 month old boy with a haemangioma on the right upper eyelid is presented. He was successfully treated with repeated injections of Betamethasone (Celestone) in the lesion for a period of five years. At the end of the third year, the aesthetic result and regression of the tumor were significant. This case and our experience have shown that intralesional steroid is an efficient therapy for eyelid haemangioma even in a period of spontaneous regression.

Key words: haemangioma; corticosteroids; intralesional therapy.

Introduction

The term haemangioma has been applied to a variety of vascular lesions. In 1982, Mulliken and Glowacki defined haemangioma as vascular tumors with a growth phase, marked by endothelial proliferation, and an involutional phase. Mulliken and Glowack recognized many entities referred to as haemangiomas as vascular malformations. A recent version of their classification has broadened the category of vascular lesions in infancy to include haemangiopericytoma, pyogenic granuloma, tufted angioma, and kaposiform haemangioendothelioma [1].

This vascular birthmark is the most common congenital tumor in children. Approximately half of them are present at birth, and the remainder become evident within the first month of life. Following the initial presentation, the proliferative phase continues of 6 to 12 months. Rarely, the lesion will be fully developed at birth. A period of slow involution then occurs for an average of 2 to 6 years. The first clinical sign of involution is grayish discoloration. Mostly,

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vascular birthmarks are solitary, ranging from a few millimeters to several centimeters in diameter [2].

Eyelid haemangiomas are a distinct clinical entity in children. They threaten vision by causing amblyopia and sensory deprivation. The risk of these complications has encouraged the use of various methods of treatment such as cryotherapy, interferons, laser therapy, radiotherapy, surgical excision, corticosteroid therapy, with different outcomes. However, using of high dose systemic or intralesional injection of steroid has been a first-line treatment [3, 4].

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

Case report

A 3-month old boy with cavernous haemangioma on the eyelid presented at ophthalmological outpatient consulting room. Physical examination revealed a large haemangioma on the right upper eyelid, measuring 35x25mm and a few smaller satellite haemangiomas, and mechanical ptosis of the same eyelid (Fig. 1).

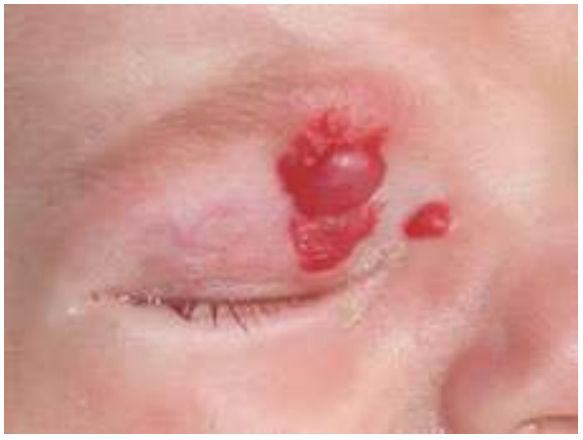

Figure1. Haemangioma before treatment

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

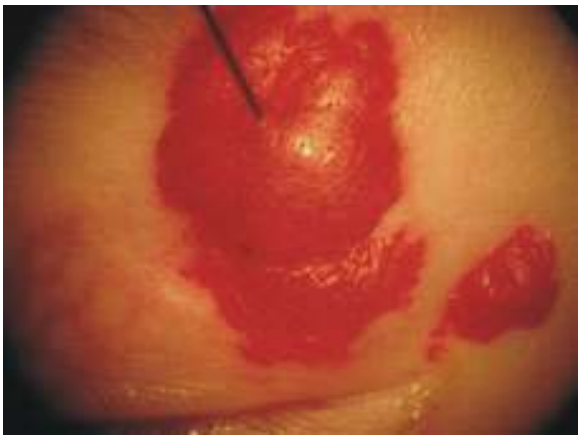

Figure 2. The procedure of intralesional injection of corticosteroid

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 (Fig. 3).

Figure 3. Result after two years of treatment

Discussion

Haemangioma is a benign tumor in infancy. The hallmark of this lesion is rapid growth during the neonatal period. Most haemangiomas do not require treatment, as most of them resolve spontaneously. Batta et al. reported a series of 121 infants with early haemangioma showing that about 40% of these cleared completely or left a minimal residual sign at the age of 1 year without treatment [4]. In a retrospective review,

Finn et al demonstrated that only 50% of 298 haemangiomas completely involuted by the age of 6 years. Of the remaining 50% that did not involute, 80% left a substantial residual cosmetic deformity. Of the 50% that did involute completely by the age of 6 years, 38% also left a substantial residual cosmetic deformity.

Nevertheless, some complications or aesthetic concerns are indications for therapy. A number of treatment modalities cryotherapy, radiation, laser therapy, corticosteroids - have been proposed for haemangioma, but the choice of a proper treatment depends on the careful assessment of every individual case [4, 5, 6].

The use of systemic corticosteroid treatment was first reported in 1967 by Edgerton of John Hopkins Hospital. The patient was treated with systemic steroids for thrombocytopenia, associated with a large facial haemangioma, and apparent shrinkage of the haemangioma was observed. Subsequent reports demonstrated that 30% to 90% of all haemangiomas responded to systemic or intralesional steroid injection [7].

Corticosteroid therapy (intralesional application) has been proposed as the most efficient for cutaneous haemangioma, particularly for those involving the eyelids [8, 9, 10, 11].

There have been several studies reviewing the corticosteroid treatment of eyelid haemangioma. Kushner was an early advocate of intralesional steroids, and has reported his results of injecting 25 eyelid haemangiomas. Total resolution occurred in 16; seven showed less than 50% decrease in the size of the lesion, the resolution being enough to prevent amblyopia. Only three cases failed to respond to treatment.

Boyd and Collin analysed their result from treating 15 haemangiomas with intralesional corticosteroid. The injections had a significant reducing effect in nine of fifteen cases (60%), a questionable effect in four cases, and little or no effect in two cases [12].

According to the literature, some rare complications have been reported including occlusion of the central retinal artery, eyelid necrosis and optic nerve neuropathy [8].

We injected Betamethasone (Celestone) into the central and satellite lesions every six months, for a period of four years. During this period we did not observe any side effect.

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 accurately predict the duration of growth and the rate of spontaneous involution, the treatment should be initiated as early as possible, rather than wait for the process of involution, and the infant should be seen frequently.

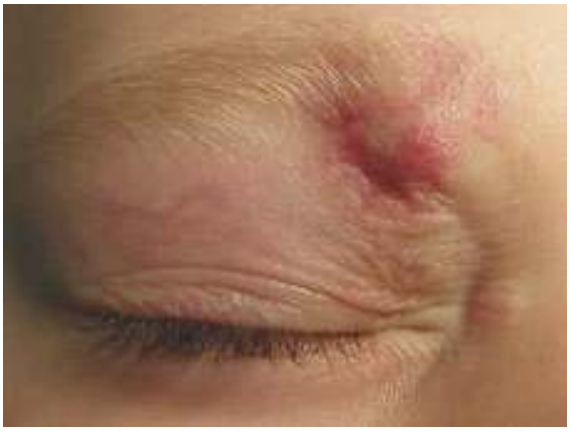

Figure 4. Result after three years of treatment

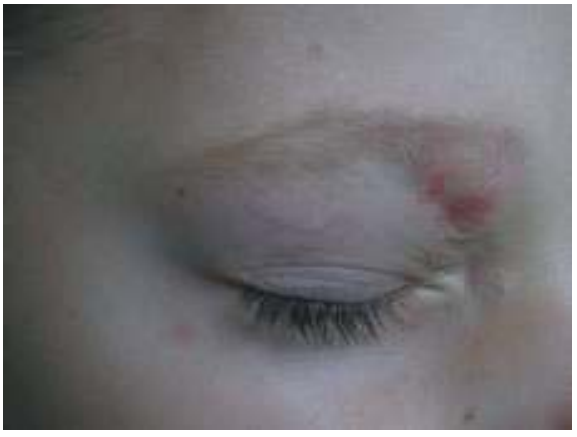

Figure 5. Result after five years of treatment

Our case clearly demonstrates good results from using intralesional steroids (Fig. 4; Fig. 5). The ophthalmic literature shows that local application is generally preferred to the oral route for eyelid lesion [13].

Conclusions

In conclusion, the best approach in management should be tailored, based on the age of patient, location, size of the lesion, presence of complications. Once a decision has been made to treat haemangioma, the main problem is to choose the most appropriate time and way of

treatment. According to the literature and our experience, corticosteroids remain the mainstay of therapy for massive eyelid haemangioma. In addition, the earlier the therapy is started, the better results can be expected [6].

References

1. Metry DW, Hebert AA. Benign Cutaneous Vascular Tumors of Infancy. Arch Dermatol. 2000;136:905-14.
2. Drolet BA, Esterly NB, Frieden IJ. Hemangiomas in Children. NEJM .1999; 341:173-181
3. Chan YC, Giam YC. Guidelines of Care for Cutaneous Haemangiomas. Annals Academy of Medicine Singapore. 2005;34:117-23.
4. Vlachakis I, Gardikis S, Michailoudi E, Charissis G. Treatment of hemangiomas in children using a Nd:YAG laser in conjunction with ice cooling of the epidermis: techniques and results. BMC Pediatr [serial on the Internet]. 2003 [cited 2008 July 8];3(2): [about 6 p.]. Available from: http://www.pubmedcentral.nih.gov/articlerender. Fcgifiarid=155650.
5. eMedicine.com [database on the Internet]. Antaya RJ. Infantile Hemangioma. c2002 [cited 2008 July 8]. Available from http://www. emedicine. com/derm/topic201. html.
6. Metry DW. Hemangiomas of infancy: Morphology and location are clinical clues to potential complications. Postgrad Med online. 2003 [cited 2008 July 8];114(1):[about 5 p.]. Available from:www.Postgradmed. com/issues/2003/07_03/metry. html.
7. Williams EF, Stanislaw P, Dupree M, Mourtzikos K, Mihm M, Shannon L. Hemangiomas in Infants and Children**.** Arch Facial Plast Surg. 2000;2:103-111.
8. Ranchod TM, Frieden IJ and Fredrick DR. Corticosteroid treatment of periorbital haemangioma of infancy. A review of the evidence. Br J Ophthalmol. 2005;89:1134-38.
9. Katarina GC, Passaro D, Frieden IJ. Hemangiomas of Infancy. Arch Dermatol 2002;138:1567-76.
10. Dourmishev LA, Dourmishev AL. Craniofacial cavernous hemangioma: succesful treatment with methylprednisolone. Acta Dermatovenerol Alp Panonica Adriat. 2005;14(2):49-52.
11. JIANG Xue-wu, WANG Guang-huan, LI Jian-hong, CHEN Zhong-xian, HE Fei. Expression of glucocorticoid receptor isoforms in cutaneous hemangiomas and vascular malformations. Chinese Medical Journal. 2005;118 :977-81.
12. Boyd MJ, Collin JR. Capillary haemangiomas: an approach to their management. Br J Ophthalmol 1991;75:298-300.
13. Garzon MC, Lucky AW, Hawrot A, Frieden IJ. Ultrapotent topical corticosteroid treatment of hemangiomas of infancy. J Am Acad Dermatol 2005;52: 281-6 .