

TREATMENT BY INJECTION WITH BLEOMYCIN OF RISK HEMANGIOMAS CASE PRESENTATION

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Abstract

Cutaneous hemangiomas are the most common tumors of infant and children. Risk or complicated hemangiomas are considered those hemangiomas located in specific anatomic areas, which can interfere with vital functions and can cause serious deformities, irreversible. Various methods of treatment are described for these complicated hemangiomas. In our clinic we used bleomycin. Article refers to three cases of patients treated with intralesional bleomycin injection which shows hemangiomas located in risk areas: nose, tongue, and ear. After these injections we obtained a significant reduction of vascular tumors and improve organs function. Cases show that intratumoral injection with bleomycin can be considered as an alternative to the surgery.

Key words: hemangiomas, complications, intralesional bleomycin injection

Introduction

Hemangiomas with special location such as neck, face, holes conduct a special approach. Since the last 5 years the number of cases with head and neck damage was predominantly in our clinic. This show the importance of knowing the modality of investigation and treatment of these hemangiomas.

In the table below you can see the distribution of hemangiomas/year (table 1)

This distribution of hemangiomas is very important because, depending on the area and the affected organ, should consider immediate treatment or therapeutic expectation.

As you can see the head and neck damage was predominantly. (Chart 1)

For treating this type of hemangiomas we used bleomycin. This agent produced extensive fibrosis and spontaneous resolution of hemangiomas. (1)

The beneficial effects of intralesional bleomycin injection (IBI) in the treatment of haemangiomas were initially reported by Kullendorf (2) and Sarihan et al. (3) More recently, the effectiveness of IBI was evaluated in 37 patients with haemangiomas in a study conducted by the Pretoria Vascular Malformation Study Group. Complete resolution or significant improvement was seen in 87% of the patients. (4)

Despite the promising results the bleomycin's mechanism of action in haemangiomas remains unknown.

Quantitative analysis showed that bleomycin inhibited neovessel growth in a dose-dependent and time-dependent manner.

Complications of hemangiomas are cosmetic and functional, and depend on their location, size, or rapid proliferating phase.

There is a sex distribution (5): 2.4 females to 1 male, so more than double presence of hemangiomas in females compared with sex male.

Material and method

I considered for this study cases of hemangiomas whose development may cause significant functional impairment or cosmetic.

This paper consists of three cases of hemangioma.

Working protocol consists in a intratumoral injection of bleomycin solution obtained by diluting 15 mg lyophilized blomycin in 15 ml of normal saline.

The injections were made at a variable interval of time, usually three weeks.

Number of injections was between one and six.

Case presentation

First case

The 6-month old infant was admitted to our clinic for fever, unfavorable and rapid vascular tumor grow up. CT examination reveals no damage other than the nasal wing. He was treated with intralesional injections of bleomycin as a 0.5 mg/ml solution in the local area. After 4 weeks, when the child was returned in our clinic he look better. Has made a new intralesional injection. After this second injection tumor was limited both in area and intensity. Third injection was performed. After this third injection we see a significant reduction of hemangioma with presence of nasal dezobstruated fosa.

The second case

Patient with age of 2.5 years. In the picture below are found a lingual hemangioma, located at the tip of the tongue (fig 6). I decided bleomycin injection of tumor. As shown in the next picture after this single injection, we see a significant reduction angioma (fig.7 Hemangioma injected after 6. The child resumes normal function of swallowing and speech

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| C | 2006 | 2007 | 2008 | 2009 | 2010 |
|--------------------|------|------|------|------|------|
| head, neck | 3 | 4 | 8 | 10 | 5 |
| trunk | 5 | 4 | 3 | 3 | 1 |
| upper limbs | 2 | 3 | 0 | 1 | 1 |
| legs | 0 | 2 | 1 | 1 | 2 |
| external genitalia | 0 | 0 | 0 | 1 | 0 |
| multiple | 0 | 1 | 0 | 1 | 3 |

Table 1. Cutaneous hemangiomas by anatomic segment affected

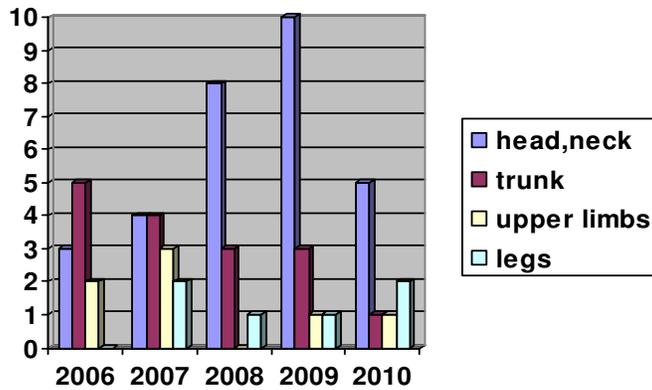


Chart 1. distribution of cutaneous hemangiomas in our clinical study per years.



Fig. 2. Uninjected hemangioma.



Fig. 3. After first injection.

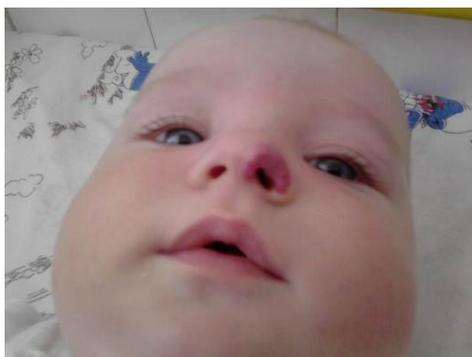


Fig. 4. After second injection.

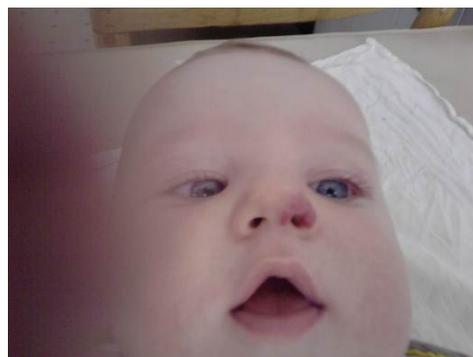


Fig. 5. After third injection.



Fig. 6. Uninjected hemangioma.



Fig. 7. After first injection.



Fig. 8. Uninjected hemangioma.



Fig. 9. After first injection.



Fig. 10. After second injection.



Fig. 11. After third injection.



Fig. 12. After the fourth injection.



Fig. 13. After the fourth injection.

The third case

A patient with age of two months, who shows a hemangioma located in the the ophthalmic and ear area which makes it be considered an emergency. As this hemangioma show when the child was presented in our clinic (fig 8). After the first injection, at intervals of four weeks is seen as ulcers and reduce tumor size was significantly reduced (fig.9). Proceed to the second injection. After six weeks of this, notice the disappearance of ulcers and normal skin tissue appearance (fig 10). It injects the third time remaining hemangioma. After six weeks we obtain the following tumor (Fig. 10). We made a new intralesional injection. After 5 weeks tumor look like this (fig 12, 13)

Results and discussions

Six patients with complicated hemangiomas have been treated with this method during a five-years period. The lesions regressed 60-100% during 6-14 months with one to six bleomycin injections. We believe that intralesional BLM injection is simple, and very useful for treatment of complicated cutaneous hemangiomas. And other authors report achieving a response of greater than 75 percent reduction in the size of the hemangioma after bleomycin intralesional injections (6).

Patient age is not a problem. In this context we refer to Asian authors (7) who made injections to a one day newborn and they found a good involution of vascular tumors without major risks to determine the avoidance of injection.

Also, other authors recommend injection of bleomycin, there were no complications or side effects. Bleomycin therapy of painful, massive hemangiomas can be recommended in older children (2).

Intralesional bleomycin is another method with which to treat hemangiomas in children and may be particularly helpful for large hemangiomas of the head and neck (6).

In the initial phase there is the temptation to straighten the treatment to a surgical one because complications seemed inevitable: ENT complications, impaired swallowing and speech, sphincter damage, impaired respiratory, dermatological and infectious.

A careful monitoring and proper injection of bleomycin in tumors showed that evolution is very good and demonstrated that exist other way than surgery.

Major difficulty lies in convincing patients to follow treatment until complete disappearance of tumor and do not abandon the medical presentation in various stages.

Conclusions

Intralesional bleomycin injection is an effective treatment in hemangiomas, obviating the need for invasive primary surgery or systemic treatment.

Injection can cause a significant involution of vascular tumors.

In cases of risk hemangiomas have acted immediately, because their growth may influence the organ function, or child aesthetics.

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