

New topical treatment of infantile hemangioma

Abstract

Infantile haemangioma is a benign angiogenesis-dependent tumour. We present here the efficacy of topical Dobesilate, a specific inhibitor of angiogenesis-dependent diseases, to treat an infantile eyelid haemangioma.

Keywords: infantile haemangioma, dobesilate, fibroblast growth factor, vascular endothelial growth factor

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Abbreviations: IHs, infantile haemangiomas; DBHS, calcium 2,5-dihydroxybenzene sulphate; FGF, fibroblast growth factor; VEGF, vascular endothelial growth factor

Introduction

Infantile haemangiomas (IHs) are the most common paediatric tumours, affecting 4-10% of infants; reaching 15% incidence in premature babies.¹ These benign tumours affect more female than males and are predominantly distributed in the head, neck and faces.² Orbital IHs can affect vision or cause other problems as disfigurement, originating often obstruction of visual axis, astigmatism, strabismus, ptosis and amblyopia in 40% of patients.³ Thus, intervention is needed to prevent the adverse consequences of these risks of IHs. 50% of IHs regress by the age of 5 years and 90% at 9,⁴ consisting in reduction of dimensions and colour intensity of the skin; however, it can be associated to telangiectasia, hypopigmentation or scar.⁴ Oral or intralesional steroids and β -blockers (propranolol) have been proposed to treat IH.⁵ However, these treatments could be associated with side effects.^{6,7} Up-to-date there is no effective treatment approved for IHs. We report here a new topical treatment for this condition.

Case presentation

A 2-months female presented with a haemangioma in the left eyelid (Figure 1) which impeded palpebral motility. Signed consent information of the treatment was obtained from the legal responsible of the infant. Infant was treated with calcium.2,5-dihydroxybenzene sulphate (DBHS) (Dobesilate) 2.5% cream prepared as previously reported⁸ at the pharmacy department of the Hospital Universitario Ramón y Cajal. Madrid. Spain. The cream was topically applied twice a day for 3 months on the child left eyelid. After treatment patient showed a substantial recovery of the lesion (Figure 1) and improvement of palpebral motility was obtained. At third visit (Figure 1) haemangioma showed near complete resolution.

Discussion

Because steroids and β -blockers actually used to treat haemangiomas present adverse side effects, new safe treatments are needed for this condition. Angiogenesis is considered the main pathogenic mechanism during new vessels formation of IHs,⁹⁻¹¹ in which fibroblast growth factor (FGF) and vascular endothelial growth factor (VEGF) have been reported to play key roles.^{12,13} Previous studies in our laboratory reported that Dobesilate is a specific and safe inhibitor of FGF and VEGF signalling,¹⁴⁻¹⁶ in angiogenesis-associated

conditions. So, we considered it should be effective to treat infantile haemangiomas. Effectively 3 months after treatment, a satisfactory improvement of infantile haemangioma using Dobesilate cream was observed, without secondary effects. Thus, the improvement of the IH reported in this study may be due to specific inhibition of angiogenesis promoted by FGF and VEGF signalling.

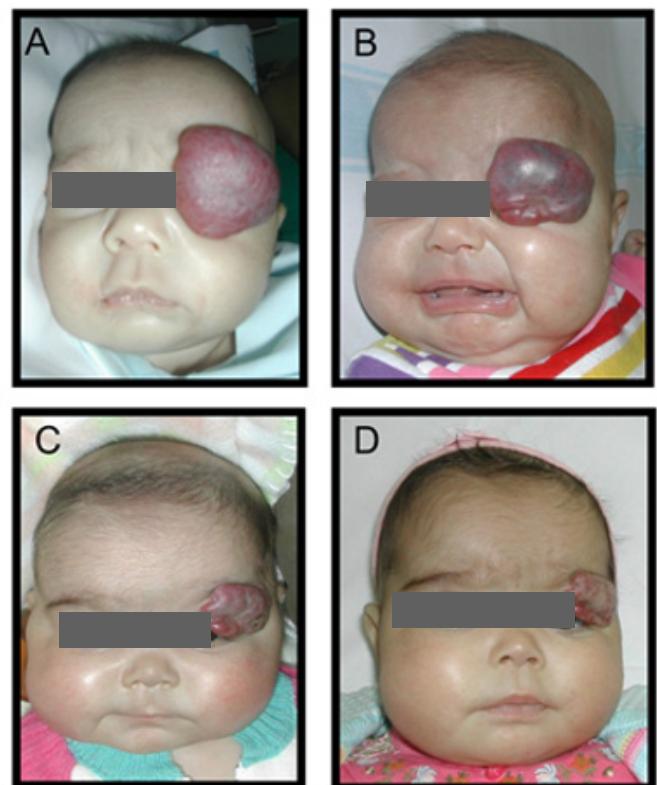


Figure 1 Picture A shows the child before treatment and pictures B, C and D show the child after treatment with Dobesilate cream after 1, 2 and 3 months respectively, evidencing a substantial and quick disappearance of the lesion.

Conclusion

We report the efficacy of topical application of Dobesilate cream in eyelid IH. This effect could be mediated by inhibition of angiogenesis that plays a key role in IHs.

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None.

Conflicts of interest

The authors report no conflict of interest. The authors alone are responsible for the content and writing of the paper.

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