

Case Report

Successful use of topical “Ankaferd Blood Stopper” for repetitive bleedings in an infant with infantile hemangioma

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Abstract: Infantile hemangioma (IH) is the most common vascular tumor of childhood. A major feature of this tumor is rapid growth during a proliferation phase in the first year of life, followed by contraction through a slow involution phase. Several complications may emerge during this course. Bleeding at the site of the lesion and infection are the most common complications. ‘Ankaferd Blood Stopper’ (ABS) is a hemostatic agent produced as a mixture of five separate plant extracts. Provision of hemostasis by ABS is independent from coagulation factors and the standard coagulation cascade. Furthermore, ABS has an antimicrobial effect. In this article, we have presented a seven-year-old infant with IH on the lower lip who had been admitted with the symptoms of frequent bleedings and infection, and who was successfully treated with topical ABS in terms of control of bleeding and infection. To the best of our knowledge, this is the first reported case of IH that has been treated with ABS for bleeding.

Keywords: Ankaferd Blood Stopper, infantile hemangioma, bleeding, infection

Introduction

Infantile hemangioma (IH) is the most common vascular tumor in childhood [1-5]. It is described as a benign neoplasm, consisting of proliferative and hyperplastic vascular endothelium [1, 2]. One major characteristic of IH is a rapid proliferation phase during first year of life, which is followed by a slow involution phase [1-4]. In general, IH recovers spontaneously without causing any serious sequelae [1-5]. However, it may lead to several functional and cosmetic complications during this course. The most common complications are ulceration, bleeding and infection [1, 3, 5]. Moreover, IH may cause visual, nutritional, respiratory and in some cases, life-threatening complications (like congestive heart failure) [1-5]. Controlling the complications is of major importance in the management of IH, because in any case, the disease will show spontaneous regression.

‘Ankaferd Blood Stopper’ (ABS) is a natural hemostatic agent used in traditional Turkish medicine, which is produced as a mixture of five separate plant extracts [6]. A number of clinical and experimental studies have been published, showing its rapid inhibiting effect on cutaneous, dental and postoperative external bleedings [7-11]. Furthermore, an antimicrobial effect has been demonstrated in ABS [12].

In this report, we have presented a 7-month-old infant with IH on her lower lip, having been admitted with frequently repeating bleedings and infection. In this case report, we demonstrated that bleeding and infection were successfully controlled with the application of ABS.

Case presentation

A seven-month-old girl who had been under follow-up for IH on the lower lip, was referred to

our emergency outpatient center with active bleeding from the lesion. The patient's history revealed that the hemangioma on the lower lip had been present since birth as a small lesion, which enlarged in time. It was learnt that during the previous months, an ulcer developed on the surface of the lesion and bleeding was seen from this site about two times a week; the bleeding was reported as excessive and hard to stop in some cases. Furthermore, it was reported that two separate infections were observed on the lesion, which necessitated antibiotherapy. On physical examination of the baby, a hemangioma was observed which covered all parts of the lower lip (~5x2 cm). On the upper region of the lesion, an ulcer with the dimensions of 0,5x0,5 cm was observed (**Figure 1**). No abnormality was seen on the examinations of the other systems and no hemangioma was seen on any other region of the body; previously performed abdominal ultrasonography and brain MRI had revealed normal findings. Routine hematological analysis and tests for hemostasis were within normal ranges. The ABS (Ankaferd Health Products Ltd, Istanbul, Turkey) spray form was applied onto the lesion site. The bleeding stopped in a few minutes. The family members were informed about when and how to apply the ABS. On the follow-up visits until 18 months of age, the bleedings recurred from time to time, but every time, it was successfully controlled by external ABS in a very short time. No local infection was seen at the lesion site during this time interval. No side effect related to the agent was observed.

Discussion

ABS is a hemostatic agent produced as a mixture of five separate plant extracts (*Urtica dioica*, *Vitis vinifera*, *Glycyrrhiza glabra*, *Alpina officinarum* and *Thymus vulgaris*) [6]. The product is registered by the Turkish Ministry of Health and it is used in traditional Turkish medicine. There are a number of experimental and clinical studies available which confirm that topical ABS stops gastrointestinal, oral, nasal and skin bleeding, independent of the presence or absence of coagulation defects [7-11]. ABS provides hemostasis independently from coagulation factors and the standard coagulation cascade. As the mechanism of action, it forms a structural net by interacting with proteins, especially with fibrinogen, in blood and hence, provides vital aggregation of



Figure 1. The lower lip hemangioma (~5x2 cm).

erythrocytes [6, 8, 9]. Since ABS does not disturb the cascade of the coagulation factors, it can be used both in individuals with normal hemostatic values and in patients with primary and/or secondary hemostatic disturbances [6, 8, 9]. ABS does not affect the coagulation factors. Trials have shown that the product has no serious local or systemic side effects [13, 14]. In addition to its hemostatic characteristic, ABS has been found to possess an antimicrobial effect [12]. The product is applied topically and three different forms, namely the liquid, spray and tamponated forms are marketed. In the literature, ABS is mainly used to stop bleeding (whether a hemorrhagic diathesis is present or not) in tooth extractions, following surgical interventions of the head and neck [7, 15], in gastrointestinal bleeding [10, 11, 13, 15] and in external bleeding among patients with hemorrhagic diathesis in situations such as circumcision [15]. However, we were unable to find any trials performed to investigate its use in external bleeding due to IH.

IH is the most common tumor seen in childhood and it is observed at a rate of 1-2,6% among newborns at term during delivery [1]. However,

this rate increases up to 10-12% at the end of the first year of life. IH generally develops as a telangiectatic macula in newborns. The lesion rapidly grows after the first week and generally reaches maximum dimensions at the end of the first year (proliferation phase) [1-4]. The proliferation phase may continue until 2 years of age in IH cases with deep localization. This is followed by an involution phase. Involution is seen in 50% of the cases until 5 year of age, and in 90% until 9 years of age [1-4]. During this course, IH may lead to certain complications. Complications are observed in 40% of hemangiomas and the complications depend on localization, dimensions and the growth rate of the lesion [1, 3]. The most common complication is ulceration [1, 3, 5]. It is typically observed during the proliferative phase and is more frequent on sites exposed to mechanical trauma. The ulcers are painful, may lead to secondary infection and bleeding, and they may cause scars during healing [1]. Localized bleeding is usually in the form of leakage and stops when pressure is applied. However, big hemangiomas may sometimes cause intensive and difficult-to-stop bleedings [1, 3]. Infection is mainly seen on the ulcerated site, but it may also develop as a primary complication such as in oral and perianal regions [1]. Apart from these three common complications, heart failure, visual disturbances, airway obstruction, nutritional disturbances and certain cosmetic problems may also develop [1, 3]. Since a great majority of IH cases undergo spontaneous regression, no specific treatment is required in most cases. In cases requiring treatment, a patient-specific choice is made among alternatives like systemic or topical steroids, interferon-alpha, chemotherapeutic agents, laser therapy and surgical excision [1-5]. For bleeding and infection, no other specific treatment is utilized, apart from applying pressure and administration of antibiotics.

In our case, we used the topical ABS product. With this intervention, we were able to control bleeding in a short time. The product may be easily applied by family members. It leads to a decreased amount of bleeding and with its antimicrobial effect, it helps in minimizing the local infection risk.

Conclusion

ABS is a readily applied and efficient hemostatic

agent with no adverse effects, which stops the bleeding in a very short time in cases of external bleeding such as that seen in children with IH and in lesions that have a predisposition to infection. The antimicrobial effect of this product will prove to be additionally advantageous during utilization. To the best of our knowledge, our patient is the first reported IH case treated with ABS for bleeding symptoms.

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