

RESEARCH ARTICLE

Fusidic Acid Ointment in Treatment of Recurrent Epistaxis in Children

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ABSTRACT

Aim: To establish fusidic acid ointment in the treatment of recurrent epistaxis in children as a local antiseptic.

Materials and methods: It was a retrospective study and a total of 184 pediatric patients' data were analyzed. Ninety-seven patients were found to be fitting in selection criteria. The time of presentation, number of episodes, treatment received, and follow-ups were noted. Results were confirmed over the phone.

Results: Ninety-five patients had simple bleed and were managed on outpatient treatment with fusidic acid ointment and saline nasal drops, while two required admission and underwent electrocautery of offending vessel. Out of the 95 patients, 10 had initial failure of treatment in the 1st month, but with continued treatment were subsequently treated. Fifteen of these 95 had episodes in the next season. The incidence of bleeding was more in summers than winters in children.

Conclusion: Fusidic acid ointments are safe and effective in the treatment of recurrent epistaxis in children.

Clinical significance: The effectivity of fusidic acid in epistaxis has never been studied. This study can establish it as an antiseptic ointment in the treatment of recurrent epistaxis.

Keywords: Fusidic acid ointment, Pediatric epistaxis, Recurrent epistaxis.

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INTRODUCTION

Epistaxis is very common in children but is often self-limiting. Recurrent epistaxis is a significant nuisance to the child and their parents. It is rarely life-threatening, but the

parents are usually very anxious. Children are especially susceptible to nose bleeds due to the extensive vascular supply to the nasal mucosa and the frequency with which they develop upper respiratory tract infection.¹ Children have special habit of nose picking which compounds the problem of epistaxis. Other causes include foreign body, deviated nasal septum, and systemic causes like dengue, idiopathic thrombocytopenic purpura, blood dyscrasias, and many others.

There is still no standardized treatment for such recurrent epistaxis. Common methods are application of petroleum jelly to the nasal vestibule and septum, use of topical antiseptic creams, and cautery of Little's area or the retrocolumellar vein.

MATERIALS AND METHODS

It was a retrospective study from November 2010 to November 2015 at a tertiary hospital. The inclusion criteria were children between 2 and 12 years, with two or more episodes of nasal bleed in at least 1 month, minimum of 1 month of follow-up, no systemic disease, no vascular malformation, and no neoplasm. The condition of nasal septum was noted. Special attention was given to findings and comments over Little's area. The type of treatment provided and condition at 1 month was analyzed. Patients' parents were questioned over phone between 1 December 2015 and 3 December 2015, and their child's present condition and their natural history of epistaxis were enquired. Parents were also enquired about the success of treatment at our outpatient department and whether they took any other treatment at some other center for the same problem. Cure was defined as no bleed after stopping the treatment for at least 1 month. Any drug reaction was also inquired in the form of any itching or excoriation at the site of application of ointment.

RESULTS

A total of 184 patient data were analyzed. Ninety-seven patients were found to be fitting in selection criteria. Fifty-one patients were excluded due to single reported episode, 30 parents did not remember their child condition over phone, 4 patients had systemic conditions like ITP and dengue, 1 patient had angiofibroma, and 1 had pyogenic granuloma.

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The peak age is between 4 and 6 years (Table 1). Seasonal variation has been documented in Table 2. A male preponderance (63 vs 34) was also seen. Thirty-five patients had more than two episodes but less than four episodes, rest 62 had more than four episodes. Unilateral vs bilateral was almost equal (47 vs 50). Ninety-five patients had simple bleed and two required admission for intractable bleeding. These two patients had retrocolumellar vein bleed and underwent nasal cautery with bipolar electrocautery. Out of the 95 patients, 63 patients had crusting with clots with leash of blood vessels at Little's area.

Treatment for these simple bleeds was saline nasal drops three times a day with fusidic acid ointment application twice daily. Simple advises like avoidance of blowing of nose, nasal picking, drinking plenty of fluids, avoidance of room heaters in winter, and going out in scorching sun in summers were also given.

No recurrence of bleeding was found in patients who underwent nasal cautery. Out the remaining 95 patients who received conservative treatment, 10 (10.5%) reported failure and had bleeding within a month. They were counselled to continue the same treatment for another 15 days. No recurrent bleed was then reported. Fifteen patients (15.8%) reported similar episodes in next season, 10 out of which reported in our OPD and rest received treatment at other centers. But all these 15 patients received conservative treatment (inputs over phone).

No untoward reaction was ever noted at the site of application of ointment. No side-effect or reaction was reported on phone.

Table 1: Age distribution

Age in years	Number of patients
2	2
3	12
4	16
5	18
6	20
7	15
8	3
9	7
10	1
11	0
12	3

Table 2: Distribution of patients among different seasons

Months	Season	Number of patients
Nov–Feb	Winters	15
Mar–Jun	Summers	70
Jul–Sept	Rainy season	5
Oct–Nov	Autumn	7

DISCUSSION

Recurrent epistaxis is more common in children between 3 and 8 years,² which is evident in our study (3–7 years). It is more common in summers in the Indian subcontinent as compared to the Western world.³ The probable reason is that Indian summers are very dry and children play outside in the sun. The dry air and less intake of water cause more crusting in anterior part of nose, leading to crusting and bleeding. The intense winter season which is long in Europe and North America is quite short in this part of the world. So the chances of bleeding are less.

Fifty-one patients had come on their 1st bleed and 62 after four or more episodes. It gives an idea that parents are more worried on 1st episode and then after multiple episodes. The main thing which worries them is of any serious systemic disease. Majority of children bleed from the Little's are as against the adults who bleed from various sites.

There are many treatment options available for recurrent epistaxis. These include application of petroleum jelly, oil-based antiseptic creams, nasal cautery with silver nitrate, local application of tranexamic acid gel⁴ and fibrin glue,⁵ and endoscopic treatment of offending vessel by diathermy. None of these treatments have been validated by prospective randomized controlled trials.^{6,7} Antiseptic creams applied over septum were found to be much effective in controlling recurrent epistaxis as compared to no treatment at all.⁸ Treatment with fusidic acid ointment and saline is quite effective along with avoidance of nasal picking. Fusidic acid is a quite effective in controlling of infections when used topically.⁹ The crust present over the nasal septum usually harbors Gram-positive cocci which are responsible for frequent infections leading to repeated epistaxis. Fusidic acid has good Gram-positive coverage. Moreover, the ointment usually prevent excessive drying leading to early healing of raw area responsible for bleeding. Saline drops keep the area moist and promote early healing of the raw area.

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