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Ulcerated nasal infantile haemangioma treated by oral propranolol

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Abstract

Infantile hemangioma affects about 10% of neonates, but usually involutes without significant complications. Complications may include disfigurement, bleeding, and ulceration, along with airway, cardiac, hepatic, and spinal complications depending upon site. Oral propranolol is now the treatment of choice in many situations. Herein we present an infant with a large hemangioma on the nose tip and show the dramatic results with the use of propranolol. The patient received seven months of therapy at 2 mg/kg/day propranolol orally in three divided doses. The response started within a few weeks and by the eighth week ulceration had healed completely without scarring.

Introduction

Infantile hemangioma affects about 10% of neonates, but usually involutes without significant complications. Complications may include disfigurement, bleeding and ulceration. In addition, airway, cardiac, hepatic, and spinal compromise may occur depending upon location [1-3]. There is no FDA approved therapy for infantile hemangioma to date. Systemic corticosteroids and vincristine were used for decades until propranolol was introduced in 2008 [3]. More than two hundred articles have been published since this first publication [4].

Propranolol has been used for therapy of all varieties and locations of infantile hemangioma. Propranolol is preferably used as early as possible (before 6 months of age). The safety profile of propranolol is reasonable. However, cardiac and blood sugar monitoring is mandatory [5]. Some centers still adopt admission for the first few days; others initiate the therapy in the outpatient or day-care facilities after preliminary ECG pulse, blood pressure, and blood glucose measurement [5]. We report here the first case treated in Qatar two years ago.

Our patient's infantile hemangioma involved the whole external nose and the nasal septum and became ulcerated shortly after presentation. The infantile hemangioma involving the tip of the nose and encroaching on the ala and septum has been given various names, such as "harlequin nose," "Cyrano nose," and "Pinocchio nose" [6].



Figure 1



Figure 2



Figure 3



Figure 4

Figures 1 and 2 before therapy, Figures 3 and 4 showing involution after two months of propranolol therapy.

Case synopsis

A 6-week old female infant, skin type II (blue eyes, fair skin), presented to our clinic with a red macule of the nose. She was born to a young couple (mother 32 years, father 36 years). She was the first child: born at 39 weeks of gestational age and delivered by Caesarean section. Her weight at birth was 4.1 kg and her apgar score was normal. The pregnancy was uneventful; there were no significant incidents except for administration of duphaston 10mg in the first trimester for low placenta. The red macule developed shortly after birth and increased in size rapidly to form a tumor that involved the whole external nose and nasal septum with obvious deviation of the nasal septum. There was no difficulty of breathing. The condition was diagnosed as infantile hemangioma; the child was examined and assessed by an otolaryngologist and pediatrician to rule out any internal associations or airway obstruction. Treatment options were discussed with the family and at 4 months of age the decision to introduce propranolol was made. The patient was hospitalized, full cardiac assessment done. Propranolol was started at 2mg/kg/ day and administered in three divided doses every 8 hours, with strict monitoring of heart rate, regular feeding, and close observation of pulse, blood pressure, and blood sugar for two days. The response was satisfactory; within 10 weeks (fig 3 and 4), the ulceration healed without atrophy. The size and color of the tumor and the deviation of the septum improved without any significant side effect of the propranolol. The treatment was continued at home for 7 months with close follow up. The patient showed sustained improvement, although residual telangiectasia and soft tissue swelling persisted, which may need further management. No residual scar in the ulcerated area is observed. After the discontinuation of the treatment (18 months) there was no relapse or rebound.

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