

## Facial Purpura in a Child After Inflating a Balloon

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**Key Words:** Facial purpura, increasing of intratorasic pressure

### Abstract

**Observations:** Purpura is defined an extravasation of erythrocytes into the dermis of the skin. Among the reasons of facial purpura of child, hematologic, vasculitic and infectious causes primarily income. Ten year-old-girl was admitted with bilateral infraorbital purpura. The results of laboratory investigations were normal. The patient described that the lesion had occurred after inflating in a balloon. Pathophysiology of the facial purpura after this conditions may be increasing of intrathoracic or intrabdominal pressure. Facial purpura developed after inflating the balloon was not reported previously. After exclusion of the other causes of facial purpura, balloon inflating should be remembered.

### Introduction

The differential diagnosis of facial purpura includes many rheumatological, dermatological, infectious, and traumatic entities. If there is a component of an underlying vascular, coagulopathic, or neoplastic condition, an emergent therapeutic approach is necessary [1]. However, various benign causes of facial purpura such as forceful coughing, vomiting or *Valsalva's* maneuver have also been reported [2].

### Case Report

Ten-year-old-girl was admitted with bilateral infraorbital rashes compatible with the purpura (Figure 1). Lesions were not blanched with the diascopy. There was no history of systemic illness, vomiting, belching, coughing, straining and drug usage. The results of laboratory investigations of purpura etiology such as coagulation parameters and complete

blood count were normal. Lesions regressed after 1 week spontaneously (Figure 2).

### Discussion

The size, duration, appearance, and the clinical course of the lesion vary significantly depending on the etiology of facial purpura. When the pediatric patients presenting with the facial purpura, vessel wall pathologies and count or function disorders of thrombocytes should be firstly considered. Vessel wall pathologies include vasculitis such as *Henoch-Schönlein* purpura, acute hemorrhagic oedema, platelet count disorder include idiopathic thrombocytopenic purpura. Purpura and ecchymosis are frequently encountered dermatologic signs of child abuse. For this reason child abuse should be excluded from the etiology of facial purpura [3]. Another reason of the facial purpura is factitious dermatitis. Factitious dermatitis should be considered if



**Figure 1.** Bilateral infraorbital purpura

there is no reason in the etiology of facial purpura and the lesion repeats [4, 5]. In our patient the lesion was not relapse after regress. Other cause of facial the purpura related to a sudden rise in the venous and capillary pressure in the head and neck caused by a rise in intrathoracic pressure and results in rupture of capillaries within the dermis [6]. Purpura can be occur at relatively loose tissues of the face and neck after strong vomiting, the Valsalva's maneuver, prolonged coughing and belching, or any other exertion as upper gastrointestinal endoscopy. Pathophysiology of the facial purpura after these conditions is increasing of intrathoracic or intrabdominal pressure [7, 8]. The name "mask phenomenon" has been used to describe this condition [6]. Facial purpura developed after inflating the balloon was not reported previously. Exclusively in one case, development of facial purpura after pulmonary function test has been reported [9]. Increasing of intrathoracic pressure after forced expiration similarly in both cases.

After exclusion of the other causes such as vasculitic, coagulopathic, neoplastic, infectious reason and other factors, that increase intrathoracic pressure in differential diagnosis



**Figure 2.** Bilateral infraorbital post inflammatory hyperpigmentation

of facial purpura, also balloon inflating, should keep in mind.

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