



## Life and Medical Sciences

### Bilateral Ocular Hypertension (OHT) and Deep Vascularized Corneal Leukoma Following Measles: Why Should We get a Vaccine?

#### Kızamık Sonrası Bilateral Oküler Hipertansiyon (OHT) ve Derin Vaskülerize Korneal Lökoma: Neden Aşı Yaptırmalıyız?

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#### Abstract

Measles is characterized by a pronounced exanthema, pathognomonic enanthema accompanied by cough, fever, and conjunctivitis. A 2-year-old girl was presented to ophthalmology department by her family with whitening and vision loss in her eyes in Mogadishu - Somalia. Retinal and vitreous layers were normal in both eyes on B-scan ultrasound. Intraocular pressure was 34 mmHg bilaterally. Bilateral ocular hypertension and deep vascularized corneal leukoma were diagnosed. This is the first case in the literature that developed bilateral ocular hypertension and deep vascularized leukoma after measles. Children are more susceptible to the severity and side effects of measles, especially in infancy. We recommend vaccination to prevent post-disease complications in young children.

**Keywords:** Somalia, Keratoplasty, Conjunctivitis, Ocular ultrasound.

#### Özet

Kızamık, belirgin bir ekzanem ve patognomonik enanem olarak adlandırılan öksürük, ateş, konjunktivit ile karakterize bir hastalıktır. 2 yaşında bir kız çocuğu Mogadişu - Somali'de gözlerinde beyaz renkte değişim ve görme kaybı ile birlikte oftalmoloji bölümüne ailesi tarafından getirildi. B-tarama ultrasonunda her iki gözde retina ve vitreus yapıları normaldi. Göz içi basıncı her iki gözde 34 idi. Bilateral lökoma ve oküler hipertansiyon tanısı konuldu. Yapılan literatür taramasında kızamık hastalığı sonrası bilateral lökoma ve oküler hipertansiyon birlikteliği olan ilk vaka olduğu saptandı. Çocuklar, özellikle bebeklik döneminde kızamıkların ciddiyetine ve yan etkilerine daha duyarlıdır. Küçük çocuklarda hastalık sonrası komplikasyonları önlemek için aşı yapılmasını öneririz.

**Anahtar Kelimeler:** Somali, Keratoplasti, Konjunktivit, Oküler ultrason.

#### Introduction

Measles is a highly contagious acute viral disease characterized by a pronounced exanthema, pathognomonic enanthema accompanied by cough,

fever, and conjunctivitis [1]. Measles was a leading global cause of morbidity and mortality in children prior to vaccination. It was responsible for more than 2 million deaths a year. In the

1980s, global measles vaccination under the leadership of the Expanded Immunization Program has rapidly lowered this rate worldwide [2]. However, the vaccination program is still not fully implemented in less developed countries.

### Case Report

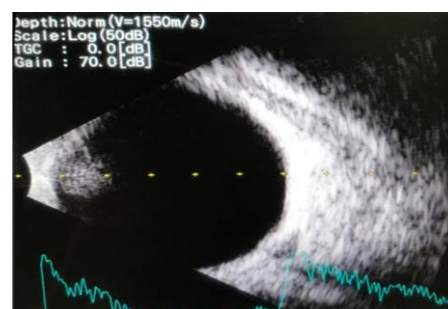
A 2-year-old girl was presented to ophthalmology department by her family with whitening and vision loss in her eyes in Mogadishu - Somalia. The patient had never been examined by an ophthalmologist before. Her family explained that the patient had measles 6 months ago and that she rubbed his eyes with his finger after the rash. The family said the patient had never been vaccinated against measles (Figure 1).

Retinal and vitreous layers were normal in both eyes on B-scan ultrasound (Figure 2). In the examination performed under general anesthesia, intraocular pressure was measured by Schiotz

indentation tonometer and it was 34 mmHg bilaterally. After ultrasonic pachymetry measurement, the corneal central thickness of the right eye was 620  $\mu\text{m}$  and the left eye was 634  $\mu\text{m}$ . Glaucoma could not be diagnosed because the iridocorneal angle and optic disc could not be evaluated. The patient had superficial and deep vascularization in both corneas. Bilateral ocular hypertension and corneal leukoma were diagnosed. No other systemic or ophthalmic disease was detected in the examination and laboratory results of the patient. 2-year-old patient was asked to be referred for keratoplasty procedures because of rapid amblyopia. However, the patient's family did not accept surgery Brinzolamide + timolol and travoprost eye drops were started to reduce OHT. At 1 week follow-up, eye pressure was 14 mmHg. According to our research this is the first case in the literature that developed bilateral OHT and deep vascularized leukoma after measles



**Figure 1:** Bilateral ocular hypertension and corneal leukoma of the patient.



**Figure 2:** Ocular USG of the patient.

### Discussion

Children are more susceptible to the severity and side effects of measles, especially in infancy [3,4]. In measles disease, ocular findings are associated with acute keratoconjunctivitis and usually heal without sequelae [5]. Although few cases of bilateral corneal leukoma after measles have been previously reported, the fact that bilateral ocular hypertension and corneal leukoma coexist, suggests that measles may play a role in the etiopathogenesis of OHT and progression to glaucoma. Antibodies formed in the body after measles may cause iridocyclitis in both anterior chambers and cause angle closure. Infancy, very severe lower respiratory tract, malnutrition, and immunosuppression are the major risk factors that increase morbidity and mortality for measles

[6]. In underdeveloped countries such as Somalia, where malnutrition is common, measles complications can be severe in terms of the eye as a result of the lack of measles vaccination. The consequences of these problems can lead to blindness [7].

### Conclusion

Despite the presence of a safe and effective vaccine, measles leading death among young children around the world is one of the reasons. Measles of vaccination campaigns mortality has been observed to have a significant effect. Today, the tendency of families not to have their children measles vaccine is increasing all over the world. We recommend vaccination to prevent post-disease complications in young children.

**Declaration of interest:** The author declares no conflict of interest and alone is responsible for the content and writing of the paper.

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