



OCULAR MANIFESTATIONS OF MEASLES: CASE SERIES

Ophthalmology

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ABSTRACT

Measles is a contagious viral infection caused by morbillivirus, a Paramyxoviridae. It is very commonly seen in developing countries especially parts of Asia and Africa. Unvaccinated children and unvaccinated pregnant women are at the greatest risk. The clinical picture involves three phases namely, prodromal stage, eruptive stage and convalescent stage. The ophthalmic manifestations of Measles are rare and are predominantly that of conjunctivitis and keratitis. Corneal involvement is a serious cause of concern and can have grave visual complications. The myriad of corneal involvement varies from simple superficial punctate keratitis to corneal perforation. We report four (04) cases of acute keratitis in young adults.

KEYWORDS

Measles; Eruption; Conjunctivitis; Keratitis.

INTRODUCTION

Historically, it is believed that the rinderpest virus in cattle jumped to humans in the time around 600 B.C. This virus became the measles virus. Rubeola or Measles is a highly contagious viral infection and is spread from person to person through the air by infectious droplets. Measles virus is a helical symmetry RNA virus from the Paramyxoviridae family. Measles is airborne and spreads through aerosols. The virus infiltrates and grows within the epithelial cells of the pharynx and lungs. The measles virus can survive in the air and on surfaces for up to two hours, which makes it very easy to catch. The clinical picture of measles can be divided into three stages namely prodromal stage, eruptive stage and convalescent stage. It is characterized by the classic triad of the three "Cs": cough, conjunctivitis, and coryza. The primary or prodromal phase lasts four to six days and is characterized by the presence of high fever, malaise, coryza, conjunctivitis, palpebral edema, and dry cough.

The second phase, the eruptive, is characterized by the appearance of a maculopapular rash, initially fine that subsequently becomes confluent. The third phase or convalescence occurs after three to four days when the rash begins to disappear, in the same order in which it appeared, leaving brown spots and producing a thin peeling of the skin. Measles can cause a number of ocular complications like conjunctivitis, keratitis, and rarely optic neuritis. The diagnosis of measles is based on clinical manifestations, epidemiology, lab investigations. There is no specific treatment for measles. People with measles need bed rest, fluids, and control of fever. Patients with complications may need treatment specific to their problems.

Here we present a series of four cases of measles infection in young adults with ophthalmic manifestations.

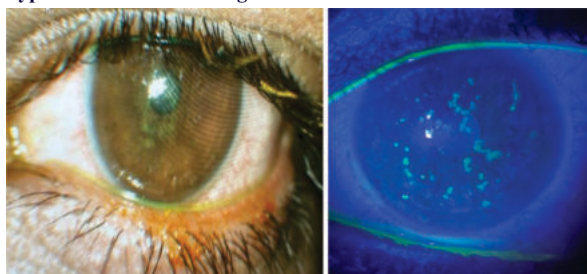
Case scenario

A 22-year-old male presented with history of fever, cough and cold of 03 days duration. Fever was associated with rashes all over the face, trunk, and limbs (Fig 1,2). He then developed blurring of vision in both eyes. It was associated with redness, watering and photophobia. On examination – Distance visual acuity was 6/24 in both eyes with no further improvement. Conjunctival congestion was present both eyes. Corneal examination revealed multiple superficial punctate corneal epithelial and subepithelial lesions (SPK) over the central cornea that stained with fluorescein (Fig 3 and 4). Rest of the anterior segment and fundus was within normal limits. Patients sample was sent for PCR for Measles virus and was found positive for the same. Individual was started on Topical FML (Fluomethalonone) Moxifloxacin and lubricants. On review at Day 3 SPKs had reduced and the same treatment was continued. On day 7 examination revealed visual acuity of 6/6 (unaided). Ocular examination revealed clear cornea.

The other 3 cases in the series were young male patients in the age group of 22-28 years and showed ocular symptomatology of pain redness, discharge from eyes. The ocular examination revealed mild blurring of vision with conjunctivitis which subsided with course of topical antibiotic and lubricant eye drops. None of the 4 cases had any long term sequelae/ complications.



Typical measles rashes- Fig 1 and 2



Ocular manifestations in form of corneal involvement (Fig 3 and 4)

DISCUSSION

Congenital infections can occur and the ocular manifestations include cataract and pigmentary retinopathy. Measles and vitamin A deficiency together are a major cause of blindness among children in areas of the world where measles is common. The most common ocular manifestations of acquired measles infection are a self-limited keratitis or conjunctivitis in the early stages of infection, but retinopathy can occur. Pink eye or acute conjunctivitis is seen in nearly all patients, which develops early on in the disease and is a hallmark symptom along with fever, cough and a runny nose, often occurring before the tell-tale rash. Corneal involvement is in form of superficial punctate erosions or keratitis which usually subsides with topical medication. However, if the corneal involvement is severe then there can be scarring or corneal ulceration/perforation which can lead to blindness. During the acute stages of retinal involvement, the fundus vessels may appear attenuated and can present optic disc swelling, small haemorrhages and stellate macular lesions. Retinal findings include macular edema, pigment epithelial abnormalities, choroiditis, whitish retinal infiltrates, serous macular detachments, areas of retinal depigmentation, and optic neuritis. There is no specific anti-viral treatment for measles, making vaccination the best means of limiting the spread of this disease.

CONCLUSION:

Measles did not cause major ocular complications in this set of patients as the patients responded well to the treatment. However, it should be borne in mind that the ocular manifestations can be severe in measles

especially in unvaccinated children and pregnant ladies and rarely in healthy individuals.

Conflict Of Interests

The authors declare that they have no conflicting interests

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