

# Nosocomial Conjunctivitis Caused By Methicillin-Resistant Staphylococcus Aureus Treatment and Preventive Measures.

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## ABSTRACT

A 30 years married female by occupation nurse presented with left eye irritation. On Examination mild hyperemia and papillary reaction in left lower conjunctiva noted. After 2 days it converted into mild discharge and raised irritation. After taking the swab for culture and sensitivity patient discharged on antibiotics and tears substitutes. Four days later received call from pathology clinic methicillin-resistant Staphylococcus aureus (MRSA) positive from culture and sensitivity report. Emergency measures taken out for example, report the case with Infectious disease, isolation, and other sample collection and systemic to diagnosis early and towards better way of latest treatment. After 10 days of treatment patient was declare clear from MRSA. Swab, a simple test may leads us treatment. Our recommendations directed towards diagnosis, treatment and preventive measure for a nosocomial infection.

**Keywords:** Linezolid, MRSA, Nosocomial conjunctivitis.

## INTRODUCTION

MRSA is of deeply concern in healthcare today, and can affect many aspects of patient health, including the eye. It is a dangerous infection and effective treatment depends on rapid and efficient recognition by the ophthalmologist to help and protect the patient's vision. In patients who have recurrent conjunctivitis, it is important to consider MRSA as a differential diagnosis. Methicillin resistant Staphylococcus aureus (MRSA) infection is a growing concern in medicine and is present in surgical and non-surgical patients. Most MRSA infections are skin infections that occur at sites of visible skin trauma, such as cuts and abrasions, and areas of the body covered by hair.<sup>[1]</sup>

Ophthalmologists need to be familiar with the trends and characteristics of MRSA infections and current treatment protocols due to its increasing prevalence and virulence. Additionally, doctors should follow infection prevention control in their practice and educate their patients on proper prevention techniques.

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## CASE REPORT

A 30 years female working nurse presented with mild discomfort in the left eye since 3 day in outpatients department. After taking full medical and ocular history ophthalmology examination done.

### 1.1 Medical History

Not significant.

### 1.2 Ocular History

Left eye discomfort and mild irritation in the lower eyelid since 03 days

### 2.3 Pertinent findings

#### -Clinical

#### Visual Acuity

Right eye (OD) 20/20

Left eye (OS) 20/20

#### Slit Lamp:

Lids/Lashes: white-green mucous discharge

Conjunctiva:

Palpebral conjunctiva 1+injection with 1+papillae

Cornea: Normal

Iris: Normal

Lens: Normal

Goldman Tonometry: OD: 14 mmHg OS: 16 mmHg at 10:00 AM

Fundus Exam: Cup to disc ratio: 0.31

Macula: clear, flat OU

Posterior Pole and Periphery: unremarkable

On examination mild hyperemia noted in the left conjunctiva and patient discharged on lubricant. Two

days later presented again with increase in irritation and mild discharge as well. On examination left lower eyelid have follicles on palpebral conjunctiva only. This unusual appearance gave us clue to take eye swab and send for culture and sensitivity. Three days later received call from pathology laboratory the culture was positive for MRSA (Methicillin resistant Staphylococcus aureus).

All preventive and emergency action taken out as early as possible. Report the case with infectious disease department. With their active advice all other action were carried out for example, Patient was isolated and all other body secretions sample send for culture and sensitivity. Fortunately there was no growth visible on all mouth, throat, ears swab. Tablet Linezolid 600 mg twice a day for 10 days started with Fusidic acid eye drop four times a day. The sign and symptoms were improved within five days of treatment. During the course of antibiotics the patient felt relax and no any side effects noted. After 10 days of treatment all culture and sensitivity tests declared negative. Patient discharge and weekly follow up done for one month.



**Figure 1:** Eye after treatment achieved.

having MRSA conjunctivitis, a culture and sensitivity must be done

Furthermore, over 80 percent of MRSA strains are resistant to all fluoroquinolones, a class of antibiotics that has been a mainstay in ophthalmology for the past two decades.<sup>[3,4]</sup>

Linezolid<sup>[5]</sup> is a new class of antibiotics, the oxazolidinones group, that provide activity against most Gram-positive bacteria's, including Methicillin and vancomycin-resistant strains. Some studies show that linezolid is safe and effective for the treatment of resistant infections in infants and children as well, but more research is needed in future to define its role.

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## DISCUSSION

There is two type of MRSA present. The Hospital Acquired Methicillin resistant Staphylococcus aureus (HA MRSA) and community acquired Methicillin resistant Staphylococcus aureus (CA MRSA).The mode of transmission for MRSA can be either through direct contact with a person from the community, community-acquired (CA) MRSA, or in hospitals, hospital acquired (HA) MRSA). The HA-MRSA more severe or potentially life-threatening infections occur in among patients and healthcare workers.<sup>[2]</sup> Other high risk groups are patients who participate in full contact sports, patients in nursing homes, patients with a history of dialysis, patients who are immune deficient, and spouses or children of healthcare workers. It is important to recognize patients who are in high risk groups for having MRSA and consider MRSA a differential diagnosis in patients who have chronic ocular discharge despite having previously been treated with anti-infective treatments. If a patient is suspected of