

UNDERSTANDING HORDEOLUM: DIAGNOSIS AND MANAGEMENT STRATEGIES

Ni Made Widya Mahayani¹,

¹Medicine Study Program, Faculty of Medicine, Universitas Mahasaraswati Denpasar, Bali,
Indonesia

Corresponding author: Ni Made Widya Mahayani

Faculty of Medicine, Universitas Mahasaraswati Denpasar, Bali, Indonesia/JEC Eye
Hospitals and Clinics.

Telp +6281236377737

Email: mahayani@unmas.ac.id

BACKGROUND

Hordeolum, commonly known as a sty, is a localized infection of the eyelid that typically presents as a painful, red and swollen eyelid. It arises from the obstruction and inflammation of the sebaceous glands of the eyelid, particularly the Meibomian glands or the glands of Zeis and Moll. Hordeolum can be classified into two types: external hordeolum, which occur at the base of the eyelashes, and internal hordeolum, which develop within the eyelid. This condition is most often caused by bacterial infections, particularly *Staphylococcus aureus*. Risk factors include poor eyelid hygiene, chronic blepharitis, and skin conditions like acne or rosacea. While hordeolum is usually benign and self-limiting, it can lead to discomfort, cosmetic concerns, and, in some cases, complications such as abscess formation or cellulitis. Early diagnosis is essential for effective management, which may include warm compresses, topical antibiotics, and, in persistent cases, incision and drainage. Understanding the pathology, presentation, and treatment options for hordeolum is crucial for healthcare providers to ensure prompt care and prevent recurrence.

CASE PRESENTATION

A Woman, 22-year-old, came to Eye Clinics with complaints of lump on the left eyelid, already 1 week ago. The lump appeared suddenly, she felt painful and itchy, the complaint is said to be the first time felt by the patient, the patient were reluctant to buy medicine at the pharmacy, but

the complaints did not improved. Fever, cough, cold and history of allergies denied. History of similar illness was denied. History of fever and Eye problems were also denied, the patient also has no history of allergies certain conditions or a history of serious illness previously. The visual acuity was 6/6 in both with normal intraocular pressure. Supporting examinations carried out, is a slit lamp so that diagnosis hordeolum can be made. Because there is still an inflammation, patient is given oral antibiotic lincomycin three times a day for five days, oral Non-Steroid Anti Inflammation (NSAIDS) for five days, and gentamycin eye ointment three times a day and warm compress before apply eye ointment. Patients suggested to control in 2 weeks. After 2 two week there is no sign of inflammation but still lump without pain and redness. So, the patient was suggested to undergo Incision and Curettage to came out the pus. After 1-week patients came to clinic, without complain and the eyelid already becomes normal.

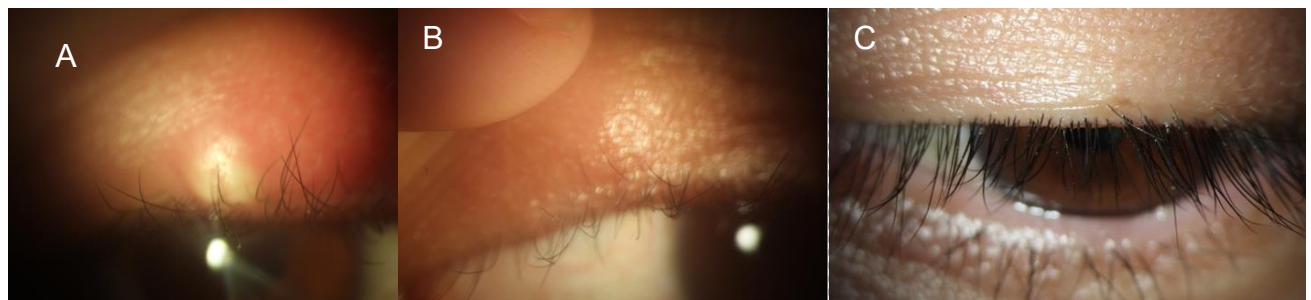


Figure 1. (A) shows the patient's eyes when she first arrives. (B) shows a photo of the patient after 2 weeks of treatment and it can be seen that the inflammation has reduced. (C) shows a photo of the eye 1 week after incision and curettage

Discussion

Hordeolum, commonly known as a sty, is a frequent eyelid condition characterized by localized inflammation and infection, typically manifesting as a painful and red bump. Understanding the diagnosis and management is needed for effective treatment and patient education. The diagnosis of hordeolum is primarily clinical, based on characteristic signs and symptoms. Patients often present with a painful swelling, which may be external (at the eyelash base) or internal (within the eyelid). Accompanying symptoms include redness and inflammation of the surrounding tissue, and in some cases, purulent discharge, especially if the hordeolum has ruptured. Differentiating hordeolum from similar eyelid conditions, such as chalazion, blepharitis, palpebral abscess, and cellulitis, is crucial for appropriate management.

Infection arises from the thickening, drying, or stagnation of secretions from the Zeis, Moll, or Meibomian glands. The Zeis and Moll glands are ciliary glands in the eye; the Zeis gland produces sebum with antibacterial properties that help inhibit bacterial growth. When these glands become blocked, the eye's defenses are compromised, leading to potential bacterial infections, with *Staphylococcus aureus* being the most frequent culprit. This can trigger a localized inflammatory response characterized by leukocyte infiltration, ultimately resulting in the formation of a purulent pocket or abscess.

In this Case, diagnosis made by thorough medical history and physical examination. Patients typically describe a gradual onset of a painful, red, and swollen eyelid, often without any prior history of trauma or foreign bodies. Visual acuity still normal. In other patients visual acuity may be compromised if the hordeolum presses against the cornea. Patients should not experience ocular pain, and their extraocular movements should remain intact and painless. Erythema is usually confined to the eyelid of the affected eye. The patient should look for a pustule, and the eyelids may need to be everted, particularly to identify an internal hordeolum.

Management of hordeolum typically starts with observation. Warm compresses applied to the affected area for 10-15 minutes, several times a day, can help alleviate discomfort and promote drainage. Patients should also be encouraged to maintain eyelid hygiene through gentle cleaning with diluted baby shampoo or eyelid scrubs, which is especially important for those with underlying conditions like blepharitis. If symptoms persist beyond a few days or worsen, medical treatment may be necessary. This can include the prescription of topical antibiotics, such as gentamycin or erythromycin, to prevent secondary bacterial infections. For moderate to severe cases or systemic involvement, oral antibiotics like doxycycline or lincomycin may be indicated. In cases of persistent or recurrent hordeolum, surgical intervention, such as incision and drainage, may be required to relieve pain and expedite healing. It's important to assess for any underlying conditions that may predispose the patient to hordeolum and to address these in the treatment plan. If there is pain during eye movement along with periorbital swelling and redness, this may indicate orbital cellulitis, which requires more aggressive management. Persistent or recurring painful lumps in the eye could suggest carcinoma and necessitate a biopsy. In such cases, referral to an ophthalmologist is recommended.

Patient education plays a critical role in the management of hordeolum. Educating patients about the nature of hordeolum, its causes, and preventative measures is essential. Emphasizing good hygiene practices, such as maintaining eyelid cleanliness and avoiding eye makeup during active infection, can significantly reduce the risk of recurrence. Additionally,

encouraging patients to manage underlying conditions, such as blepharitis, acne, or rosacea, is vital for long-term prevention. While hordeolum is typically benign, it can significantly impact a patient's quality of life due to pain, cosmetic concerns, and potential complications. Understanding these implications helps healthcare providers offer comprehensive care.

Moreover, the psychosocial impact of hordeolum should not be overlooked. Visible lesions can lead to anxiety regarding appearance, and addressing these concerns through empathetic communication and realistic treatment expectations is important. For patients with recurrent hordeolum, establishing a long-term management plan that includes regular follow-ups, ongoing education about hygiene, and monitoring for any underlying conditions can improve outcomes.

Conclusion

In conclusion, hordeolum is a common condition that requires a comprehensive understanding of its diagnosis and management. Through careful assessment, appropriate treatment strategies, and patient education, healthcare providers can effectively manage hordeolum and improve patient quality of life. Ongoing research into the pathophysiology of hordeolum and innovative prevention strategies will further enhance care for affected individuals.

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