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Management of Immature Cataract and Islamic View of the Disease

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Abstract

Cataracts are the leading cause of blindness in the world. According to the WHO, there are an estimated 39 million blind people in the world and half of them are caused by cataracts. This report presents the case of a 65-year-old male patient with complaints of blurred vision in the right eye since 5 years ago, the complaints were felt in both eyes but felt heavier in the right eye.Physical examination of the eyes found that the lens of the right eye was cloudy. Visus in the right eye was 1/300 and in the left eye was 20/63. There was partial clouding of the right lens. Then the patient was given cendo lyters eye drops 3 times a day 1 drop and the recommended surgical therapy was phacoemulcification.

Introduction

Cataracts are the leading cause of preventable blindness worldwide. Cataract is an eye disease characterized by clouding of the lens of the eye that interferes with light entering the eye. Cataracts can be caused by disruption of water and electrolyte balance control mechanisms, by denaturation of lens proteins or a combination of both. Approximately 90% of cataract cases are age-related; other causes are congenital and traumatic (Cantor et al., 2018; Suhardjo & Agni, 2012).

Epidemiologically, cataracts are a significant global health problem. According to the World Health Organization, approximately 51% of blindness cases in the world are caused by cataracts. In developing countries, the prevalence of cataracts is higher and access to cataract surgical services is often limited, resulting in high rates of preventable blindness. In Indonesia, the prevalence of blindness due to cataracts is approximately 1.5% in the population above the age of 50 years, indicating the need for special attention to the management and prevention of this condition. Cataract management involves an integrated approach, including proper diagnosis, medical treatment to relieve symptoms, and surgical intervention to restore vision (Fahmi, 2019).

Cataract is one of the leading causes of blindness in the world and can occur at various stages, including the immature stage. At this stage, the lens of the eye is significantly clouded but not fully mature, so there is still potential to restore vision with appropriate medical intervention. Management of immature cataracts has become an important focus of blindness prevention efforts, with various approaches being developed to improve patients' quality of life. This study aims to examine the management of immature cataract from a medical perspective and review the Islamic view of the disease, including how Muslims should deal with and manage this health condition (Ananda & Safitri, 2023).

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Modern surgical techniques such as phacoemulsification have become the gold standard in cataract treatment, offering effective results with a low risk of complications. Public education on the importance of early detection and better access to eye health services are key steps in reducing the global burden of this disease. With advances in technology and surgical techniques, the prognosis for cataract patients continues to improve, allowing them to enjoy a better quality of life post-surgery (Aini & Santik, 2018).

In the Islamic view, health is a gift that must be preserved, and illness is considered a test and a means to get closer to Allah. Therefore, understanding the management of immature cataract is not only important from a clinical perspective but also in a spiritual and religious context. Islam provides clear guidelines in terms of maintaining health and seeking treatment, which encourages its followers to actively seek medical solutions while surrendering to the will of Allah. This article aims to bridge medical understanding and religious values, so as to provide comprehensive guidance for medical practitioners and Muslim patients in cataract management (Putri Humardani et al., 2023).

Methods

Qualitative research methods are an appropriate approach to explore the management of immature cataracts, as they allow researchers to understand this phenomenon in depth through case studies. In this study, researchers can use in-depth interviews, participatory observation, and medical document analysis to collect rich and detailed data. This approach allows the researcher to capture the nuances, experiences and perceptions of patients and medical personnel in the management of immature cataracts, thus providing a comprehensive picture of the management process.

Data analysis in qualitative methods is usually done inductively, where patterns, themes and categories are identified from the data that has been collected. In the case study of immature cataract management, the researcher can use thematic analysis techniques to find common patterns that emerge from the experiences of different individuals. As such, this method not only provides a deeper understanding of immature cataract management but can also lead to practical, evidence-based recommendations to improve clinical practice in immature cataract management.

Case

A 65-year-old man came to the clinic of Lapalaloi Maros Hospital with complaints of blurred vision that had been experienced for 5 years. Complaints were felt in both eyes but felt heavier in the right eye. There was no red eye, no watery eyes, no itching, no pain, no history of wearing glasses. There was no history of hypertension, no history of diabetes mellitus.

The patient came with a general condition of mild pain, good nutritional status, and compos mentis consciousness. From the results of the examination of vital signs obtained results within normal limits. The results of the ophthamologic examination were found in the palpebral conjunctiva not pale, the sclera was not yellow, the iris was brown, the eye reflexes in both eyes were positive, the lens of the left eye was cloudy. Visus in the right eye was 1/300 and in the left eye was 20/63, no exophthalmus, endophthalmus, nystagmus, strabismus, hyperemia, and edema were found. There was partial opacification of the right lens.

From the results of history and physical examination, a diagnosis of cataract senelis matur oculi dextra was obtained. For medical therapy given to patients, namely cendo Lyters eye drops 3 times a day 1 drop. For non-medicamentous therapy recommended is surgical therapy with phacoemulcification technique.

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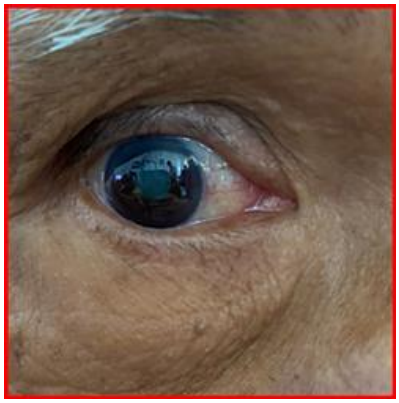

Figure 1. right eye with cloudy lens

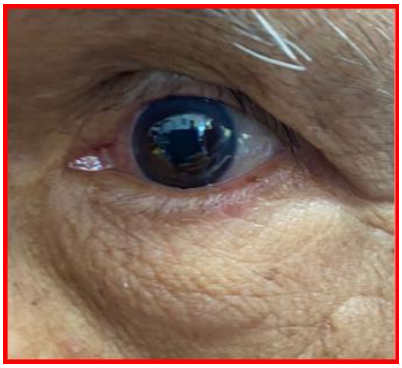

Figure 2. left eye

Result and Discussion

The diagnosis of cataract in the patient is based on history and physical examination, namely the main complaint is blurred vision that has been felt since 5 years. On physical examination of the eye, it was found that the lens was partially clouded, and the pupillary reflex was still positive. From the symptoms the diagnosis leads to immature cataract (Aini & Santik, 2018).

This patient did not have other symptoms often associated with eye diseases such as red eyes, watery eyes, itching, or pain. This reinforces the diagnosis of senile cataract as these symptoms are more commonly found in other eye conditions such as conjunctivitis or acute glaucoma. The absence of a history of wearing glasses also indicates that the visual impairment experienced is more likely due to changes in the lens rather than a refractive error.

Ophthalmological examination showed that the palpebral conjunctiva was not pale and the sclera was not yellow, indicating no anemia or jaundice that could be a sign of other systemic diseases. The iris was brown and the eye reflex was positive indicating that there was no anterior abnormality other than the cloudy lens. Cloudiness of the right lens and a significant decrease in vision (1/300 in the right eye) leads to the diagnosis of a mature cataract, where the cloudiness of the lens is severe and affects vision significantly (Fahmi, 2019).

The decrease in vision in the left eye (20/63) indicates the presence of cataract in that eye but still in a milder stage. This is consistent with the development of cataracts which are usually bilateral but not always symmetrical in severity. There are no signs such as exophthalmus, endophthalmus, nystagmus, strabismus, hyperemia and edema, which may indicate other ocular or neurological conditions.

The diagnosis of senile cataract matur oculi dextra was based on significant clouding of the lens and a drastic decrease in vision in the right eye. Maturated senile cataract is an advanced stage of cataract where the lens becomes very cloudy and dense, resulting in a sharp decrease in vision. Medicamentous therapy given in the form of cendo Lyters eye drops aims to relieve

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symptoms of mild irritation and provide comfort to the patient's eyes before surgery is performed (Aini & Santik, 2018).

The recommended non-medicamentous therapy is the phacoemulsification technique, which is the modern and most commonly used method of cataract surgery today. Phacoemulsification uses ultrasonic waves to break up the cloudy lens into small fragments which are then suctioned out of the eye. After the cloudy lens is removed, an intraocular lens (IOL) is implanted to restore the patient's vision (Ameliany & Ermawati, 2022).

Phacoemulsification has the advantage of a small incision that speeds up the healing process and reduces the risk of postoperative complications compared to conventional cataract surgery techniques. Patients can experience significant improvement in vision after surgery, and the risk of complications such as infection and corneal edema is also lower. Based on the patient's condition and examination results, phacoemulsification is the best option to restore optimal visual function to the patient's right eye (Ingraham et al., 2022).

Normally the lens is a clear and transparent structure. In patients with blurred vision (like seeing smoke) this is due to cloudiness in the lens which causes disruption of the refraction of the eye. The eye cannot pass through the refractive media normally because it is obstructed by the cloudy lens (He et al., 2020). Epidemiologically, cataracts are the leading cause of blindness worldwide, accounting for approximately 51% of global blindness cases according to World Health Organization data. In Indonesia, the prevalence of cataracts is also very high, with reports suggesting that 1.5% of the population above the age of 50 years experience blindness due to cataracts, and this rate increases with age. Surgical interventions such as phacoemulsification are essential in public health programs to reduce the burden of cataracts and improve the quality of life of patients (Cantor et al., 2018).

The risk factors for cataracts include age over 50 years, women, low socioeconomic conditions, frequent exposure to ultraviolet light, high cholesterol, low body protein and albumin levels. In patients, the risk of cataracts is female gender and age 80 years, where the risk of cataracts increases above the age of 50 years (Ameliany & Ermawati, 2022). Cataracts occur due to a degeneration process that can cause denaturation and coagulation of proteins in the lens so that the lens loses its transparency. Senile cataracts are age-related, vision-reducing cataracts characterized by continuous and progressive thickening of the lens. Senile cataracts are generally divided into 4 stages, namely 1) the incipient stage 2) the immature stage 3) the mature stage 4) the hypermature stage (Ingraham et al., 2022). The inspiens stage is the stage of lens swelling due to water, lens turbidity is still mild, glaucoma often occurs, on examination a positive shadow test is obtained. The mature stage is that if the cataract is left untreated, the lens will become completely cloudy and the visus decreases dramatically to 1/300 or can only see a wave of the hand within 1 meter. On examination, the shadow test is negative. Hypermature stage i.e. In the late stage, the cortex liquefies so that the nucleus falls out and the lens descends from the capsule (Morgagni). The lens looks completely cloudy, the vision has decreased so much that it can reach 0, and complications such as uveitis and glaucoma can occur. On examination, the iris is tremulous, the front eye chamber is deep, the angle of the eye chamber is open, and the shadow test is false positive (Cantor et al., 2018; Fine et al., 2002)..

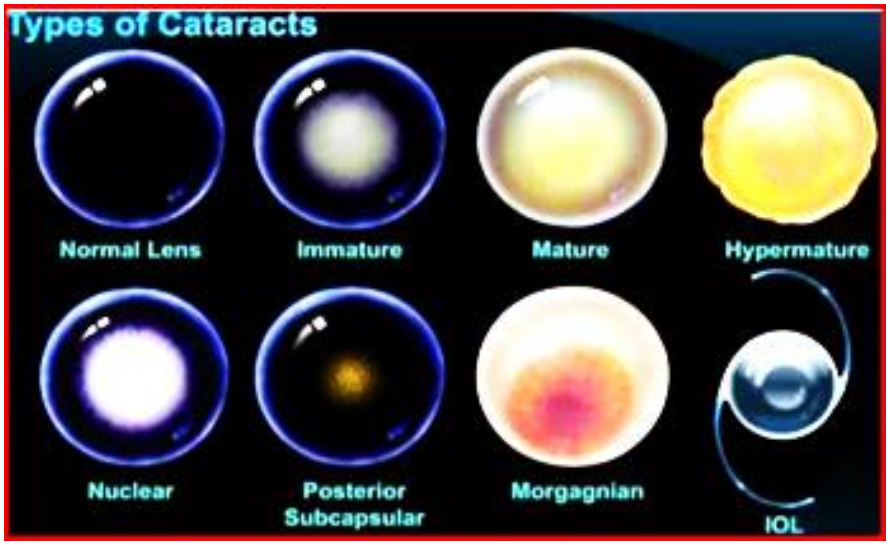

Figure 3. Types of cataracts

The primary treatment for mature senile cataract is surgical intervention. Phacoemulsification is a modern surgical technique that is recommended in these cases. This procedure involves the use of ultrasonic waves to break up the cloudy lens into small fragments which are then suctioned out of the eye. Once the cloudy lens is removed, an intraocular lens (IOL) is implanted to restore the patient's vision. This technique has several advantages, including a small incision that speeds up the healing process and reduces the risk of postoperative complications (Cantor et al., 2018).

Surgery is performed if the patient's vision is worse than 6/24 or there are other medical indications such as phakolytic glaucoma and phakomorphic glaucoma from a detachment that interferes with eye health. Surgery on senile cataracts is performed by extracting the lens which can be done by several methods, namely 1) Intracapsular cataract extraction (ICCE), Indications for ICCE in cases of weakness in the zonules and instability of the capsule bag. Removal of the entire lens requires a 12-14 mm wide incision which requires longer healing and a greater risk of astigmatism, Extracapsular cataract extraction (ECCE) In this method, the posterior lens remains intact and the nucleus and cortex will be extracted, 3) Small Incision Cataract Surgery (SICS).The use of this technique provides many advantages to patients. SICS is performed with a 6 mm wide scleral incision to extract the lens cortex and nucleus. (Ameliany & Ermawati, 2022).

The phacoemulsification technique is a modern surgical method to treat cataracts, especially in cases with mature senile cataracts. The procedure uses ultrasonic energy to shatter the cloudy lens into small fragments, which are then sucked out of the eye. This is done through a small incision in the cornea, usually around 2-3 mm, which allows the surgery to be performed with minimal trauma to the eye tissue. After the cloudy lens is removed, an artificial lens (IOL) is inserted into the remaining lens capsule. This technique is highly efficient and has a low complication rate, and allows for rapid visual recovery in patients (Aaberg et al., 1997).

The phacoemulsification procedure is performed under local anesthesia, so the patient remains conscious but painless during the surgery. The steps in this procedure include making a small incision in the cornea, using a phacoemulsifier to crush and remove the cloudy lens, and fitting an intraocular lens. The success of this surgery is highly dependent on the surgeon's expertise and the patient's eye health condition before surgery (Ilyas & Yulianti, 2014).

After surgery, the patient will be instructed to avoid activities that may increase intraocular pressure, such as heavy lifting or excessive bending. Patients will also be given antibiotic and anti-inflammatory eye drops to prevent infection and reduce inflammation. Follow-up

examinations are scheduled to monitor healing and ensure that the intraocular lens is in the correct position. Cataract surgery is an important part of public health programs. In Indonesia, the prevalence of cataracts is very high, with reports suggesting that 1.5% of the population above the age of 50 years is blind due to cataracts. Mass cataract surgery programs and improved access to cataract surgery services can significantly reduce the burden of this disease and improve the quality of life of patients (Linebarger et al., 1999).

The main advantage of phacoemulsification is the minimal incision size required, which contributes to a faster healing process and lower risk of infection. This method also allows for excellent visual results with less postoperative discomfort. It has been shown that phacoemulsification offers superior results compared to conventional cataract extraction techniques, both in terms of visual acuity and in reducing postoperative recovery time (Aaberg et al., 1997).

The risk of complications from phacoemulsification is relatively low, but they do exist. Possible complications include infection, corneal edema, increased intraocular pressure and intraocular lens dislocation. To reduce these risks, it is important to follow strict sterile protocols during surgery and provide adequate postoperative care. Patients should also be educated on the signs of complications that require immediate medical attention (Aaberg et al., 1997; Linebarger et al., 1999).

In the long term, the results of cataract surgery are usually excellent, with many patients reporting significant improvements in the quality of vision and daily life. The use of intraocular lenses can also correct refractive errors, allowing patients to see more clearly without the need to use glasses for daily activities. Studies show that phacoemulsification has a high success rate and minimizes the risk of complications when performed by an experienced surgeon (Aaberg et al., 1997; Benítez Martínez et al., 2021).

Overall, the management of this patient's senile cataract involved an accurate diagnosis, medication for temporary comfort, and phacoemulsification surgery as a long-term solution (Grzybowski & Kanclerz, 2020). With proper treatment, the patient is expected to regain her vision and significantly improve her quality of life. This case also highlights the importance of public health programs that focus on early detection and treatment of cataracts to prevent blindness in the wider population (Aaberg et al., 1997).

In the Islamic perspective, health is a great gift from Allah SWT that must be maintained and maintained properly. The Prophet Muhammad SAW said, "There is no gift better and more extensive than patience" (HR. Bukhari and Muslim). This reflects the importance of patience and trust in the face of health trials, including the cataract disease experienced by this patient. Muslims are encouraged to always try to find the best treatment, as in the Prophet's hadith which states, "Every disease has a cure. If the right medicine is used for a disease, it will be cured with the permission of Allah SWT" (HR Muslim).

In this 65-year-old patient's case of senile cataract, Islam teaches the importance of making an effort to seek appropriate treatment. The use of eye drops and the phacoemulsification surgical procedure are forms of medical endeavor that are recommended. Islam does not prohibit the use of modern medical technology as long as it is in accordance with sharia principles and aims for good (Putri Humardani et al., 2023). The Qur'an states, "And do not throw yourselves into destruction" (QS. Al-Baqarah: 195), which can be interpreted as an order to maintain health and seek treatment when sick (Ananda & Safitri, 2023).

In addition to medical efforts, the Islamic perspective also emphasizes the importance of prayer and trust in Allah SWT. Patients and their families are encouraged to increase prayer and dhikr, asking Allah SWT for healing. A commonly taught prayer is, "Allahumma rabban nas adzhibil ba'sa isyfi antasy-syafi la syifa'a illa syifa'uka syifa'an la yughadiru saqaman" (O Allah, Lord

of all mankind, remove this disease, heal it, You are the Healer, there is no healing except healing from You, healing that does not leave the disease) (HR. Bukhari and Muslim).

From a social perspective, Islam teaches its followers to help and support the sick. The community around the patient can provide moral, spiritual and even financial support if needed. The principle of mutual cooperation and social care is highly upheld in Islam, as in the hadith of the Prophet Muhammad, "The example of believers in terms of mutual love, compassion, and mercy is like one body. If one member of the body is sick, the whole body will feel the pain with sleeplessness and fever" (HR. Bukhari and Muslim).

Finally, in the face of diseases such as cataracts, Muslims are reminded to be patient and keep trying, while relying on Allah SWT to decide everything. Patience in the face of this test is a form of worship that brings us closer to Allah SWT. The Qur'an states, "Surely with difficulty there is ease" (QS. Al-Insyirah: 6), which gives hope that every test will be followed by ease and healing. By maintaining a balance between medical and spiritual efforts, patients are expected to achieve recovery and an improved quality of life (Ananda & Safitri, 2023; Putri Humardani et al., 2023).

Conclusion

This study concludes that the management of immature cataract requires an appropriate medical approach, either through surgical intervention or conservative management, according to the patient's condition. In this case, the procedure used was phacoemulsification. In addition, the Islamic view of disease, including cataracts, emphasizes the importance of effort in seeking treatment, while reinforcing the belief that healing is the will of Allah. As a suggestion, the author recommends that patients with immature cataracts not only follow medical recommendations but also strengthen the spiritual aspects of the healing process, by upholding Islamic values, such as patience and tawakal. This holistic approach is expected to provide optimal results, both physically and mentally for patients.

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