

## KIE how to use Corticosteroid and Vitamins to Patients after Cataract Surgery at KMU Madura

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### ABSTRACT

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The main cause (50%) of blindness in Indonesia is cataracts, cataracts are one of the main health problems in the elderly, the only way to overcome blindness due to cataracts is to perform cataract surgery. Cataracts are a common disease that is often suffered by the elderly, cataracts themselves are characterized by cloudiness in the lens of the eye so that it blocks clear vision, based on national data from the 2014-2016 Ministry of Health's rapid assessment of avoidable blindness needs survey, with the target population being the age group Over 50 years it is known that the blindness rate reaches 3% and cataracts is the highest cause of blindness (81%), representatives and association of Indonesian ophthalmologists dr. Aldiana Halim said that in 2017 there were 8 million people with visual impairments. As many as 1.6 million blind people, plus 6.4 million people with moderate to severe visual impairment, of these, 81.2% of visual impairment is caused by cataracts, other causes are reflex and glaucoma or eye disorders related to diabetes. Corticosteroids are natural steroid hormones in humans which are produced by the adrenal cortex gland and function to treat inflammation or autoimmune disorders in the body. the function of this corticosteroid class of drugs is the same as the corticosteroid hormone produced by the body. After cataract surgery, the doctor gives several drugs to the patient to prevent post-surgical complications including infection (given antibiotics for prophylaxis), dry eye syndrome (given artificial tear drops) and to reduce pain (given anti-inflammatories). This community service aims to increase the knowledge of post-cataract surgery patients about how to use corticosteroid eye drops and how long to use corticosteroid eye drops.

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## INTRODUCTION

World Health Organization (WHO), there are at least 135 million people who experience very significant visual disabilities and there are more than 50 million blind people worldwide today, with the most common cause of blindness being cataracts (51%). The occurrence of senile cataracts is associated with diabetes mellitus, family history of cataracts, long-term use of steroids, smoking, exposure to ultraviolet (UV) rays. Indonesia as a developing country has many eye health problems. The estimated incidence of cataracts is 0.1% per year or every year among 1,000 people there is a new cataract sufferer. Indonesian people also have a tendency to suffer from cataracts 15 years earlier than residents in subtropical regions, around 16 - 22% of cataract patients who are operated on are under 55 years old. The prevalence of cataracts in Indonesia according to the results of the examination by enumerators in the 2013 Riskesdas was 1.8%, the highest in North Sulawesi Province (3.7%) and the lowest in DKI Jakarta (0.9%). (RI Ministry of Health, 2013).

Cataract surgery is the most frequently performed surgical procedure in the world (Solomon et al., 2020). In developing countries, the problem of blindness due to cataracts is much bigger, because people do not immediately go to the eye doctor, until they lose their sight. The reasons include, due to a lack of attention to eye health and economic problems (Allen & Vasavada, 2006). After undergoing cataract surgery, doctors prescribe several medications for patients, namely antibiotics to prevent postoperative infections and steroidal and non-steroidal anti-inflammatory drugs to reduce the risk and severity of intraocular inflammation and artificial tears to reduce the risk of dry eyes (Solomon et al., 2007).

The drugs given after cataract surgery are adjusted to the condition of the patient's eyes, such as antibiotics, anti-inflammatories, analgesics, and anti-glaucoma. Antibiotic and steroid eye drops (combination) must be given to postoperative patients to be used every day for at least 2 weeks (Latief, 2002), antibiotics are used to prevent infection and steroids are used to prevent inflammation that occurs after cataract surgery, use of topical steroids is more than 2 weeks can result in an increase in intraocular pressure (Eviati, 2002).

Increased intraocular pressure (IOP) can result in reduced visual activity, shallow anterior chamber, choroidal tissue effusion, optic nerve edema and macular edema. Symptoms felt by patients are pain in the area around the eyes and blurred vision. This is of course very disturbing when carrying out daily activities (Steinert, 2010). The average ocular pressure of normal eye patients in the right eye was 15.4000 mmHg and 14.9440 in the left eye.

Long-term use (more than 40 days) of steroids or high doses of steroids can cause two eye problems, namely cataracts and glaucoma. Types of cataracts that can occur are posterior cortical cataracts. Usually, the use of corticosteroids for a long time can cause posterior subcapsular cataracts, the pathophysiology of cataracts due to long-term administration of corticosteroids cannot be clearly ascertained, but what is certain is the type of corticosteroid that can cause cataracts, namely the type of glucocorticoids (hydrocortisone, dexamethasone, methylprednisolone), these are all related to the metabolism of carbohydrates, fats, and proteins, and are related to anti-inflammation by inhibiting the release of phospholipids. In theory, corticosteroids induce protein (myosin) in the trabecular area, causing edema in the area. This edema induces open-angle glaucoma. ([http://mata-fkuisrcm.org/corticosteroid use/](http://mata-fkuisrcm.org/corticosteroid%20use/)). Exposure to a lot of ultra violet rays (sun), can cause limited damage to the cornea to damage to the lens and retina, its nature can damage the epithelium in parts of the eye. (Ilyas, 2014).

Based on the above problems there are still many populations who experience cataracts, especially in the elderly, so to prevent misuse of corticosteroid drugs given to post-cataract surgery patients, researchers feel it is important to do community service about "IEC how to use corticosteroid drugs and administer eye vitamins to postoperative patients. cataract surgery"

## METHODS

The implementation method is the basis or reference so that the process in this community service program runs in a systematic, structured and directed manner. After the process of field observation and problem identification is carried out, a solution implementation method will be carried out. Furthermore, the solutions that have been planned will be offered to partners, there are several stages in the method of implementing community service

Description : Officers carry out KIE using corticosteroid drugs after undergoing cataract surgery and the importance of vitamin support in the healing process ; Objective: to increase the knowledge of post-cataract surgery patients about how to use corticosteroid eye drops and the duration of using corticosteroid eye drops ; Target: All patients after cataract surgery in the main eye clinic

## RESULTS

Community service activities, especially conducting counseling about KIE and giving free vitamins to post-cataract surgery patients at the KMU Madura eye clinic in Burneh sub-district, Bangkalan district, are important things for all cataract patients to know, especially patients who are going to have cataract surgery. In order to achieve this goal, the KMU Madura eye clinic community service program is carried out through several stages, namely the first stage is the socialization stage with the partner director of the KMU Madura eye clinic to support this program. The Preparation Stage is starting from the activity proposal, location, preparation of IEC materials to implementation permits. Implementation Phase The activity is made as attractive as possible in which it contains learning and instructions for the proper and correct use of drugs after cataract surgery which is expected to be conveyed properly and at the end of the KIE we provide free oral vitamins with an explanation that these vitamins support healing from cataract surgery which has been done.



## DISCUSSION

Our initial step was to prepare a number of vitamin tablets and ensure that they could assist pharmacy staff in conducting complete and appropriate CIE in post-cataract surgery patients.

Patient education after surgery is carried out clearly. Patients are informed about how to care for an eye that has been operated on when they are going back home, of course, including things that can be done and things that can and cannot be done. Information is given specifically about the next visit and schedule for control with the doctor at the time determined by the patient. It must be explained how to contact the clinic when experiencing complaints of symptoms that can indicate worsening vision, or unbearable pain.

Post-cataract surgery patients who want to go home must use eye protection and must bring eye drops and understand how to use these eye drops, the frequency of using painkillers is conveyed including how to use them for fear that the patient at home will experience pain at home.

Education that must be carried out for post-cataract surgery patients includes that the patient must clean the eyelids in the morning and evening with a damp and clean face cloth by avoiding pressure on the eyeball. Protect the operated eye for the first week by wearing eye protection while sleeping and sunglasses or glasses during the day. Drops prescribed after cataract surgery must be used according to the prescription. Patients can eat according to a normal diet after surgery by being advised to consume enough water and fiber from fruits, vegetables and whole grains to avoid constipation. Patients can wash their hair the day after surgery but avoid getting soap, water or shampoo in the operated eye.

The patient should not wear eye makeup for at least a week and the use of store-bought cotton pads is not recommended for the patient's eyelids as the cotton particles left behind can be a site for the accumulation of bacteria which can cause infection. Patients are advised to avoid sleeping on the side of the eye being operated on. Patients are advised not to do strenuous activity or exercise and not to lift heavy weights above 5 kg for 2 weeks after surgery and avoid swimming for 2 weeks after cataract surgery, at the KMU Madura eye clinic the recommendation is written and given to the patient to take home.

Giving vitamins to patients after cataract surgery is very necessary to support the wound healing process from the operation, nutritional needs can be met by consuming foods of high nutritional value every day such as vegetables, fruit, meat, eggs and others. The current phenomenon is that foods with high nutritional value are difficult to fulfill, so we need supplements. Supplements are usually given by doctors to meet daily intake of vitamins and minerals to support the healing process. This supplement can work optimally by avoiding cigarettes and exposure to cigarette smoke.

## CONCLUSION

After cataract surgery, the doctor gives several drugs to the patient to prevent post-surgical complications including infection (given antibiotics for prophylaxis), dry eye syndrome (given artificial tear drops) and to reduce pain (given anti-inflammatories).

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