BLIND REDUCTION RATE, IS IT IMPORTANT TO EVALUATE?

Dr. dr. Farida Siri, SpM

Abstract

Introduction: Cataract causes more than 50% of blind in Indonesia1 and 82% amongst the blind at 40 years up of West Java people2. The only treatment and prevention of cataract blind is surgery; so the quality of surgery is the important factor to eradicate the blindness3. The indicator to know the effectiveness of the surgery include blind reduction rate, no. of persons who are not longer blind post operatively divided by total no. of cataract blind person operated on 4. This paper shows BRR at Cicendo Eye Hospital within 5 years (2002-2006).

Methods: The descriptive, retrospective and analytic study with secondary data from medical record have been collected and analyzed by SPSS-10 and X2 test. The several factors influence the rate was also analyzed.

Results: Blind reduction rate within 5 years is almost 90% as required in the WHO guidelines5. The BRR is related to the several factors like the follow up rate, the type of cataract, the type of surgery, the patients’ age group, and last but not least the skill of the surgeons; it was not related to the gender and patients’ status, whether they were poor or rich.

Conclusion: The blind reduction rate at the hospital showed the satisfied results but the final visual outcome should be improved as targeted by WHO guideline. The improvement of the quality of the surgery is also required by the hospital as a teaching hospital as well as the referral eye hospital.

Recommendation: Develop the standard monitoring evaluation of cataract surgery at all institutions to improve the surgery outcome. This standard should be nationally implemented as an obligation to increase the eradication national blindness.

Ophthalmologica Indonesiana, Volume 33 No. 3 Sept-Des 2006

Cataract is the major cause of blindness in developing countries includes Indonesia, cataract causes 52% of blind in Indonesia1 and 82% amongst the blind at 40 years up of West Java people2. Cataract surgery as the only treatment to prevent blindness is conducted by all eye specialists in the country both in hospital based setting and mass cataract camps/outreach services. Due to the limited hospital report combined by roughly estimation, the amount of cataract surgery done until recently is not more than 200.000 per year, that’s mean, not even 1 per-mill people have had surgery done, while the cataract backlog and prevalence is still high. When we talk about not reach quantity so how about quality of the surgery? WHO guideline for the cataract blind intervention3 is not only output but also outcome of the surgery. The indicator mentions also for the BRR - Blind Reduction Rate4, how many cataract blind become not blind after surgery? Why the blind patients are still blind? What to do and what to be improved, what is the effort and what should be promoted, monitored/evaluated and what to be conducted? The cataract surgery done in the country could not be
monitored for the visual outcome since no regulation and no task from the government or even from professional association to monitor the quality. This paper try to present the Blind Reduction Rate (BRR) and post-operative visual outcome of the cataract surgery done by hospital team in 5 years to motivate other institutions to also evaluate what happened in their places.

As the referral hospital, serves for tertiary eye care as well as a teaching hospital, the surgery conducted by 35 eye surgeon and 40 doctors of residency training program.

To improve the institution performance, we have to know where are we now; so we have to know what is the quality of the surgery at the present, how is the output and outcome, what is the blind reduction rate of the patients' doing cataract surgeries.

**METHOD**

The data of the patients doing surgery (inclusive for complete medical record) have been collected as the secondary data; 1000 cases selected from 2002 and 2003, 2000 cases selected each year, 2004, 2005, and 2006 used study form referred to ICEH/WHO form.

This descriptive, retrospective and analytic study has been analyzed by SPSS-11, and x² test to find the significant factors which influence the BRR and outcome of the surgery.

The demographic patients related to the gender, age group, social status, type of surgery, the follow up rate and the visual outcome will be presented with the blind reduction rate as the final target of the study.

**RESULTS**

1. Patients' demography

   Cataract blind patients visited the hospital consisted of 5% of children under five, 5% of 6-19 years old, 20% of productive age group and most of patients above 55 years (70%).

   The study showed the male patients doing surgery (55%) were more than female (45%).

   The Government commitment presented in this study as the amount of subsidized patients comes for surgery was more than 50% of all patients.

   Trends within 5 years: productive age group, gender, subsidized patients

2. Surgery and outcome

   The table showed that for average: 88% patients with cataract senile, 5% juvenile and 5% congenital, 2%
include traumatic cataract. There was surgery trend to transverse to small incision either manual or phaco-emulsification. There was improving trend also for IOL implantation; 97-98% eyes get IOL implant causes improving blind reduction rate within 5 years, from 87.5% in 2002 to 96% in 2006. The results also showed the improving good visual acuity from 55% to 73% even the result was still under the WHO target (>80%). The complication was also show the decreasing trend from 5.4% to 1.6%. The good motivation of patients to do follow up schedule also increases, at the fifth year more than 50% patients doing follow up at one month and more than 30% patients doing follow up at 2 months. The table showed also the prediction of 2008 and 2010.

3. Significances of the results

There are different significance visual outcome with age group (p: 0.000), type of cataract (p: 0.000), type of surgery (p: 0.000), and time of follow up (p: 0.000). There are no different significance result between gender (p: 0.340), between paying/nonpaying patients and between class rooms (p: 0.114) as showed at Table 7.

DISCUSSION

The main problems to get the good Blind Reduction Rate are regarding to the surgeons, the patients and the hospital staffs as well as the hospital management.

The patients have no motivation to conducting their follow up visit as required by hospital due to the not understood of the use of follow up visit. Some patients said they did not come for the follow up visit because they have satisfied with the vision results. Some of them said that they did not come due to not available person to accompany them to the hospital. Most of the patients with bad results usually always come for follow up visit regarding their hope to have good vision. Hospital management include facility, equipment, system, medical committee, medical audit have the important role to improve the surgery quality and outcome. While the surgeon performance such as skill, attitude, knowledge, standard operational procedure plays another important role for Blind Reduction Rate. The same role and perception of patients' condition and people's perception

The hospital performance trends to increase and improve year by year.

The hospital sets the prediction number of some indicator within next 3-5 years.

The blind reduction rate at the hospital is satisfaction enough but the visual outcome has to be improved. To improve the visual outcome after surgery several efforts should be done:
- Develop the strict standard guidelines from professional association regarding the outcome and how to reach the target.
- Develop the comprehensive microsurgery training of the cataract surgery and try to the transition era; leave the conventional ECCE and move to the small incision cataract surgery (SICS) either by manual or machine.
- Motivate the eye surgeon to be honest to improve their surgery if needed.
- Develop the training centers which are available, affordable with qualified and formally certified.
- Multi center data collecting of visual outcome post-op.
- Monitoring and evaluation conducted by institution and coordinated by Perdami
- Perdami could facilitate training to improve the outcome and doing advocacy to the Government.

2. Sirlan Farida: West Java Eye Health Survey 2005


4. WHO / PBL publication /2000: Blind Reduction Rate