

RESEARCH ARTICLE

Eye Disorders in Bangladesh: A Hospital-based Descriptive Study

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Abstract: The incidence and treatment of common eye disorders in Bangladesh are poorly understood. This study aims to provide a comprehensive overview of this clinical challenge to better enable the design of appropriate healthcare strategies. Different types of eye disorder data were collected from patients aged 1 to 96 years admitted for eye surgery from March 2016 to October 2016 (N = 2390) at the Bangladesh Eye Hospital in Dhaka, Bangladesh. Patient age distribution and types of treatment received were analysed, and incidence rates calculated. Patients (58% male) underwent a total of 43 different types of eye surgeries. Among the surgeries reported 32.8% were Avastin intravitreal injections, 25.5% were Phaco with IOL, 14.6% were retinal laser therapies, 7.5% were YAG Laser and 6.5% were VR surgery. It is notable that higher number of people suffered in ocular, cataract and retinal disorder respectively among all the eye disorders. With increasing patient age, the number of eye disorder treatments increased and it reached to peak number in the age group 56-60 years, although numbers varied greatly across age groups.

Keywords: Eye disorder, avastin, cataract surgeries, phaco, retinal laser

1 Introduction

Eye disorders are common among people of all ages, and are defined as an impairment or abnormal functioning of the eye which leads to significant visual disturbance or impairment. Some result in blindness although most lead at least to blurred vision (Dineen *et al.*,

2003; Tomkins-Netzer *et al.*, 2014). The most common disorders that are serious enough to require hospital treatment include refractive errors, cataracts, glaucoma, retinal disorders, macular degeneration, diabetes-related eye disorders and conjunctivitis (Dineen *et al.*, 2003; Tomkins-Netzer *et al.*, 2014). As with most organ pathologies the chance of developing an eye disorder increases with age. Good vision is crucial at all ages for confident mobility and functioning while poor sight creates social dependency for daily activities and renders an individual prone to accidental injury (Dhital *et al.*, 2010). Overcoming an eye disorder to restore proper functional sight can necessitate therapeutic interventions, which may include surgery, requiring hospital visits.

A commonly employed treatment is a local application of bevacizumab (trade name Avastin), a vascular endothelial growth factor (VEGF) blocking agent. This treatment can cause stabilization or regression of neovascular activity as well as vascular permeability (Ferrara *et al.*, 2005). Avastin thus has been commonly used for several ocular diseases including diabetic retinopathy, age-related macular disease, and vein occlusion (Lynch and Cheng, 2007). It is also used for the management of neovascular glaucoma and rubeosis iridis (RI) (Grisanti *et al.*, 2006; Qureshi *et al.*, 2009).

Most of the developing countries of south Asia, cataracts are the most common blindness causing conditions, and the majority of cases of blindness globally, result from cataract formation (Pizzarello, 1987). Blindness is certainly a major health care problem in Bangladesh, where about 750,000 people are blind, including 40,000 children, although many of these are avoidable through proper treatment and care (Syed Mohammad Didarul Alam, 2017; national council for blind, BNCB; Bourne *et al.*, 2004). A quarter of the world's population lives in the South East Asia region defined by the World Health Organization, which includes Bangladesh, and a third of the world's 45 million blind people live in the region (Organization *et al.*, 1999). Cataracts are responsible for 50 – 80% of blindness in this region (Bourne *et al.*, 2003). Phacoemulsification (Phaco), manual small incision cataract surgery (MSICS), extracapsular cataract extraction (ECCE) and intracapsular cataract extraction (ICCE) surgical techniques are all used in cataract surgery (Gogate *et al.*, 2010). After the removal of the cataract, an intraocular lens (IOL) is usually implanted into the eye for good vision (Bourne *et al.*, 2004). Retinal laser surgery is performed as a treatment for a variety of retinal disorders including retinal arterial macroaneurysms, retinal vein occlusions, central serous retinopathy, diabetic retinopathy, ocular histoplasmosis and retinal breaks (Kozak and Luttrull, 2015).

Some assessments have been conducted on the incidence of cataract surgeries in Bangladesh (Gogate *et al.*, 2010; Lindfield *et al.*, 2008), as well as causes of blindness and visual impairment in Bangladeshi adults (Dineen *et al.*, 2003), blindness related to smoking (Bidwell *et al.*, 2005) and the Bangladesh Population-Based Diabetes and Eye Study (Islam *et al.*, 2016). However, while there is data on age-related eye disorders and on the incidence of eye disorders that most commonly affect people in Bangladesh (Wong *et al.*, 2006; Dineen *et al.*, 2003) there have been little assessment of how this relates to hospital-based treatment. Therefore, the aim of this study is to provide a comprehensive overview of recent data on eye disorders of people at a major hospital in Bangladesh to inform future strategies to deal with eye disorders.

2 Materials and Methods

2.1 Data and Variables

Data was collected on classified eye disorders in patients aged between 1 and 96 years old admitted between March 2016 and October 2016 to eye surgeries in the Bangladesh Eye Hospital located at House # 19/1, Road # 6, Dhanmondi, Dhaka - 1205, Bangladesh, which is one of the leading eye hospitals in Bangladesh. We collected anonymous information on patient gender, age, and eye operation types. Data from a total of 2400 patients were collected; 10 records were omitted from the study due to incomplete information.

2.2 Statistical Analysis

Data from 2390 patients were analysed by two approaches. Firstly, we analysed this data based on patient age groups and quantified male and female frequency and percentages for each age group and also performed the same for some types, e.g., maximum number of patients undergone operations. Secondly, we analysed our data based on types of operations performed and proportion of different types of operation performed, as well as male:female frequencies calculated for each operation type. We used R software packages for statistical analysis and visualization (Gentleman *et al.*, 2004), and OriginPro software (version 9.0) is also used for data visualization (Seifert, 2014). We also performed chi-square test, Pearson residuals and relative contribution to find out the associations of age with sex.

3 Results

Data was collected from different eye surgeries from a major eye hospital of Bangladesh. Among 2390 subjects, we found 58% male and 42% female had undergone different eye surgeries. Patients' age ranges from 1 to 96 years at the time of surgery. Age was grouped into eighteen categories. Overall the number of males (238) and females (167) were greatest in the age group 56 to 60 years old. Data are summarised in Table 1.

Table 2 shows the maximum eye operations according to age group. We observed that the patients in the age group 51 to 55 years had undergone 43.5% Avastin treatments (62% M, 38% F), 23.5% Phaco with IOL (39.2% M, 60.8% F), 14.6% retinal Laser and 7.3% YAG Laser (52.2% M, 47.8% F). The number of procedures was 351 for 15 different eye disorders in this group. We also observed that overall age groups the maximum number of patients was in the age group 56 to 60 years where 35.6% patient had undergone Avastin therapies (Total: 144, 68.1% M, 31.9% F), 30.1% Phaco with IOL (Total:122, 52.5% M, 47.5% F), 13.1% Retinal Laser (Total: 53, 60.4% M, 39.6% F), 9.1% YAG Laser (35.1% M, 64.9% F) and 6.4% VR Surgery(69.2% M, 30.8% F). The total number of operations was 405 in this period, which included 19 different operations performed on this group of patients (see Table 2). In the age group of 61 to 65 years old we observed there were 300 patients (62.3% M and 37.7% F) undergoing 12 different operations including Avastin intravitreal injection (30.3%), retinal laser (12.3%) and YAG laser (10.7%) were the most common.

For the age group of 66 to 70 years old there were 220 patients (54.6% M, 45.5% F) undergoing 17 different types of procedure, including 31.8% patients undergoing Avastin intravitreal injection, 37.3% Phaco with IOL and 8.6% YAG laser. For individuals 71 to 75 years old, we observed there were 100 patients (65% M and 35% F) of 11 different

Table 1: Eye disorder patients distribution by age groups. 17 age groups, representing the number of male (M) and female (F) patients, total patients, M and F percentages and total patient's percentages for each group.

Age Range (Year)	Male (M)	Female (F)	M+F	M %	F %	Total%
1 to 5	9	13	22	40.9	59.1	0.9
6 to 10	5	5	10	50	50	0.4
11 to 15	16	19	35	45.7	54.3	1.5
16 to 20	18	18	36	50	50	1.5
21 to 25	36	18	54	66.7	33.3	2.3
26 to 30	52	27	79	65.8	34.2	3.3
31 to 35	43	41	84	51.2	48.8	3.5
36 to 40	72	65	137	52.6	47.5	5.7
41 to 45	137	80	217	63.1	36.9	9.1
46 to 50	138	127	265	52.1	47.9	11.1
51 to 55	175	140	315	55.6	44.4	13.2
56 to 60	238	167	405	58.8	41.2	17.0
61 to 65	187	113	300	62.3	37.7	12.6
66 to 70	120	100	220	54.6	45.5	9.2
71 to 75	65	35	100	65	35	4.2
76 to 80	46	25	71	64.8	35.2	3.0
81 to 85	12	6	18	66.7	33.3	0.8
86 to 96	17	5	22	77.3	22.7	0.9
Total	1386	1004	2390	58	42	100

operations where 24% patients had undergone Avastin intravitreal injection, 38% Phaco with IOL and 13% YAG laser.

The fewest types of operations (3 types) of were performed in 18 patients in the age group 81 to 85 where 33.3% was for Avastin intravitreal injection, 44.4% Phaco with IOL and 22.2% YAG laser. For the next older age group 86 to 96, there were 22 patients (77.3% M, 22.7% F) of 5 different operations where 18.2% patients had undergone Avastin intravitreal injection 45.5% Phaco with IOL and 22% YAG laser (see Table 2).

Among very young patients the pattern of therapies was quite different. In the age range of 1 to 5 years, we observed 31.8% operation was EUA, 31.8% was probing, 18.2% was Phaco with IOL. The total number of operations for this age group was 22 and the number of types of operation was 6. There were only 10 operations (6 different operations) for patients in the age range 6 to 10 years where 40% operation was Phaco with IOL and 20% was Chalazion.

Among young adults in the age group 21 to 25, there were 18 types eye operations and the total operation was 54 where 24.1% was retinal laser, 7.4% was YAG Laser, 7.4% was C3R surgeries (see Table 2). In the age group 46 to 50 (265 operations of 19 types), 39.6% was Avastin intravitreal injection, 21.5% Phaco with IOL and 17.4% Retinal Laser (see Table 2).

Figure 1 shows the male vs. female frequency according to the age group. We observed that number of male patients is greater than the number of female patients in the age group 21 to 96 and number of the male and female patient are approximately equal in the age group 6 to 10 and 16 to 20. In the age group 1 to 5 and 11 to 15, number of female patients is greater than the number of male patients (see Figure 1).

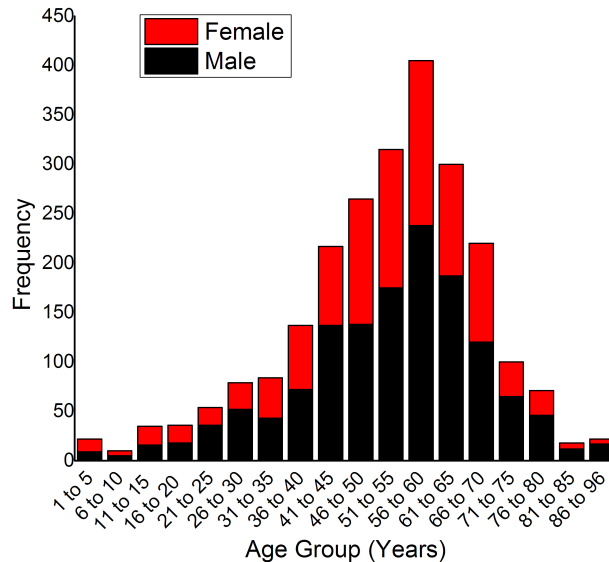


Figure 1: Male vs. female frequency according to age group. This figure shows the comparison of male and female counts in each age group.

Figure 2 shows the male vs. female frequency according to different types of eye surgeries. According to different types of operation (Total $n=2390$, operation types=43), we found that there were 32.8% Avastin intravitreal injection (Total: 784, 36.6% F and 63.4% M), 25.5% Phaco with IOL (Total: 609, 48% F and 52% M), 14.6% Retinal Laser (Total: 350, 36.6% F and 63.4% M), 7.5% YAG Laser (Total: 180, 47.8% M and 52.2% F), 6.5% VR Surgery (Total: 155, 60% M and 40% F), and so on (see Table 3).

Figure 3 shows the male vs. female frequency of Avastin surgeries and Phaco with IOL according to age group. We observed that the delivery of Avastin treatments was maximal in the age group 56 to 60 years and then 51 to 55 and 46 to 50. For the case of Phaco with IOL surgeries, age group 56 to 60 were in the maximum case and then 61 to 65 years, 66 to 70 years and 51 to 55 chronologically. Retinal Laser surgeries were highest in the age group 56 to 60 years and then 51 to 55, 46 to 50 and 61 to 65 in the number of order. YAG Laser surgeries were maximum cases in the age group 56 to 60 and then 61 to 65, 51 to 55 and 46 to 50 respectively as shown in Figure 4.

4 Discussion

This epidemiological study provides an overview of eye disorder treatments performed in a major Bangladesh hospital. Such analyses are important to inform practicing physicians and health care managers to understand and manage different types of eye disorder. We analysed the data according to age group and operation types. In our analysis, we found that 16% male had undergone different eye operations which is more than female and the ratio

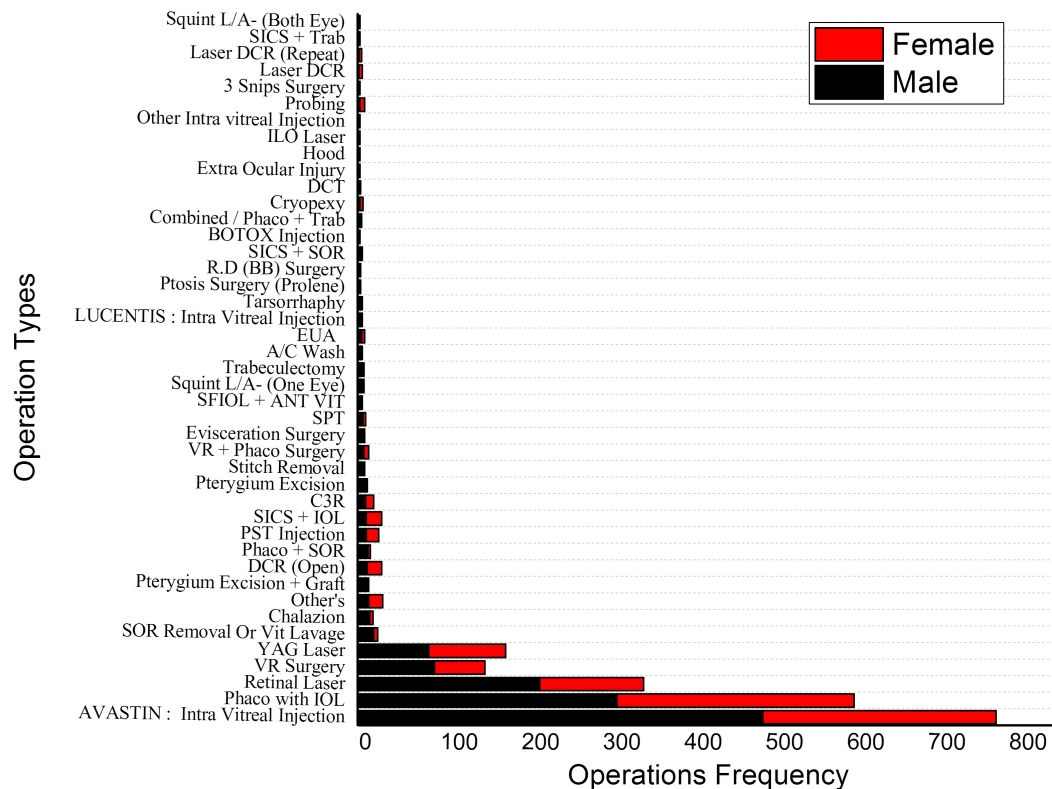


Figure 2: Operation distribution by sex. This figure represents the comparison of male and female counts in each operation and also shows the comparison of eye operations to each others.

was 1.4:1 (M/F), suggesting that males appear to suffer more eye disorders than females in Bangladesh. Which this data reflects demand for clinical services, it was unclear whether this reflects actual clinical need or whether other social or economic issues complicate the data, which was not addressed in this study.

We performed χ -square tests among all 17 age groups male and female frequencies and found this identified an association between different age groups, genders and types of surgery. To find out the associations between different age groups and sex, Pearson residuals were calculated and visualized using the R package corrplot (See Fig 5 (a)). It was observed, in figure 5 (a), that age groups 1-5, 11-15, 21-25, 26-30, 36-40, 41-45, 46-50 and 51-55 strongly associated with male and female patients. We also calculated the contribution of each cell to the total χ -square score (see Fig 5 (b)) and found that age groups 1-5, 11-15, 41-45, 46-50 and 85-96 were strongly associated with males and 1-5, 11-15, 26-30, 41-45, 46-50, 61-65 and 85-96 were strongly associated with females. According to age group, we found that maximum numbers of eye operations were performed in the age range 56 to 60 years (total: 405) followed by age range 51 to 55, 60 to 65, 46 to 50 and 66 to 70 respectively.

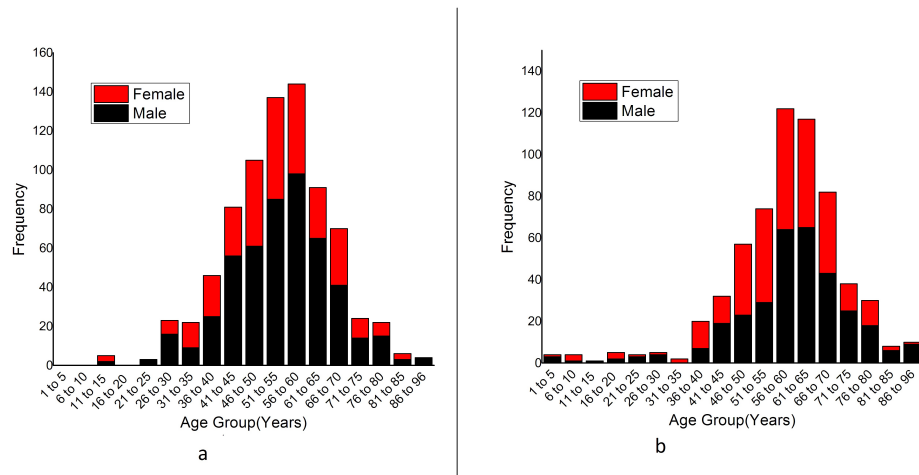


Figure 3: Male vs. female frequency for (a) Avastin and (b) Phaco with IOL according to age group. Representing the comparison of male and female counts in each age group in the case of (a) Avastin and (b) Phaco with IOL operations.

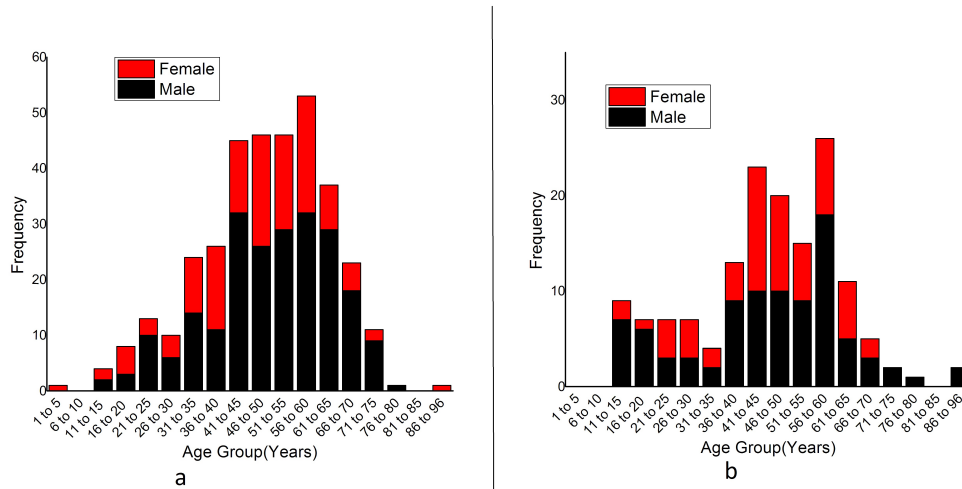


Figure 4: Male vs. female frequency for (a) Retinal laser and (b) VR surgeries according to age group. Showing the comparison of male and female counts in each age group in the case of (a) Retinal Laser and (b) VR surgeries operations.

Regarding the type of operations performed, there were more than 43 types of eye operations and most common therapies performed were Avastin treatments. Here, the male to female ratio was 1.7:1. We investigated this ratio for other treatments, including Phaco with IOL (M/F ratio 1.1:1), Retinal Laser (M/F ratio 1.7:1), YAG Laser (M/F ratio 1:1.1) and

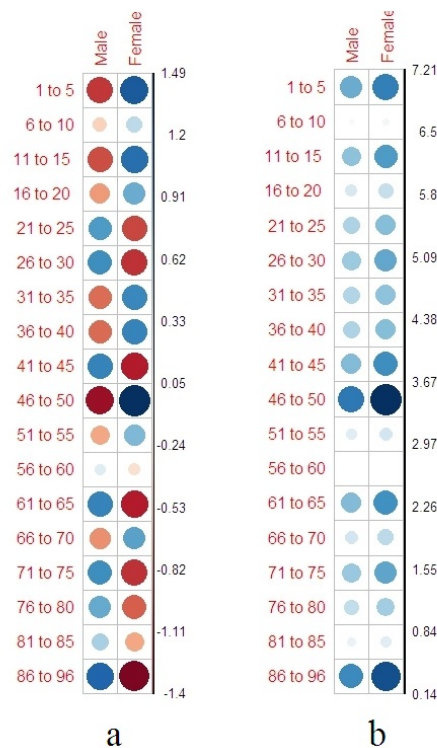


Figure 5: (a) the standardized residuals calculation. For a given cell, the size of the circle is proportional to the amount of the cell contribution and (b) The relative contribution of each cell to the total χ -square score

VR (M/F ratio 1.5:1) surgeries. Avastin treatment has been commonly used in a number of ocular diseases (Lynch and Cheng, 2007), while Phaco with IOL has been used mainly for cataracts (Bourne *et al.*, 2003) and retinal laser therapy for retinal disorders (Gogate *et al.*, 2010). The number of people with ocular, cataract and retinal disorders were observed followed by primary eye disorder in this hospital in Bangladesh in 2016.

We found that significantly more males received cataract surgical treatment than females, and the number of cataract surgery (Phaco with IOL) was maximal in the age range 61 to 96. Similarly, in a study conducted by Joydhan *et al.* (2015), more males (57.3% of total) received surgical treatment for cataract than females (41.7%) (Joydhan Tanchangya, 2015). The study of Mohammad *et al.* (2016) indicated that the primary cause of blindness was cataract (75.8%) and cataract surgical coverage for blind people was more commonly performed in males than females (Mohammad Muhit, 2016). Thus, surgical intervention for cataracts is disproportionately higher in male subjects than in females, suggesting in a larger burden of untreated cataracts (and untreated blindness) females in Bangladesh (Dineen *et al.*, 2003). Our result was consistent with this earlier data.

In China, by contrast, the proportion of cataract surgeries was greater in females compared to males. Wu Hui *et al.* noted that there were 10,8190 cataract surgeries in 17 cities in Shandong Province, the Peoples republic of China from January to December 2013. Of

the 108190 patients, 73856 (59.9%) were female and 43338 (40.1%) were male, where 39496 were 71 to 80 years old. Thus the male to female ratio was 1:1.6 (Wu Hui, 2016).

It was identified in the study of Rajiv et al. (2015) that relatively fewer male received cataract surgical treatment compared to females in India, a neighbouring country of Bangladesh. These researchers reviewed a representative sample of 108,238 patients who underwent cataract surgery at three eye institutions in different states of India from 2004-2005 and 2010-2011. There were 49.4% male and 50.6% female (Rajiv Khandekar, 2015). We also found from the study of Apoorv et al (2016) that more males faced cataract problem than female in the rural area of India. He mentioned that among 746 patients, 400 patients (53%) had cataract where 247 (61.8%) were male and 153 (38.3%) were female and in the age group 60-80 years (Bhardwaj, 2016). In the United States, cataract problems in females are significantly greater than in males where higher proportion of those treated were female (60.6%) while males were fewer at 39.4% (Friedman, 2012). In contrast to this in this major Bangladesh, hospital the male to female ratio is 1.1:1 for cataracts. This may indicate that females receive less treatment or it may be that the sex ratio for cataract incidence is different to other countries.

We also found that ocular diseases were maximal in the age range 56 to 60 years, followed by the 50 to 55, and 46 to 50 year categories. For cataract surgery, maximal case numbers were in the age range 56 to 60, not unlike the preponderance in older people reported in the Chinese and rural India studies above, where the maximum cases were in 71 to 80 years and 60-80 year categories respectively. For retinal problems, the maximal case was in the age range 56 to 60 followed by 51 to 55 categories and 46 to 50 category. Thus, in our analysis, we found that people in the age group 56 to 60 generally faced more eye problems than other groups and they were more serious to overcome the eye problems.

5 Conclusion

This data was collected from a Bangladesh eye hospital which is one of the leading hospitals in the case of eye related problems. The data collated and analysed in research is based on the collected data from this hospital only. In the future, to get a more comprehensive picture of treatments and clinical need in Bangladesh, a more detailed study is needed that draws on data from hospitals of Bangladesh. Nevertheless, this study does provide an overview of the distribution of eye disorders treated in this major hospital which probably reflects the situation in the country. This research suggests that the frequency of eye operations on males is greater than in females and that with increasing age, the number of eye operations increases and with a peak for most conditions in the 55 to 60 age range. It is notable that a higher number of people suffers in ocular, cataract and retinal disorder respectively among all the eye disorders.

Abbreviations

Avastin - Bevacizumab Injection

Phaco- Phicoemulsication

IOL - intraocular lens

VR - Vitreo-retinal

YAG - yttrium aluminum garnet

PST Injection- Posterior sub-Tenon injection
C3R- Corneal Collagen Cross-Linking

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MAH, TAA and MAM conceived the study, acquisition of data, carried out analysis, interpretation of data and contributed in writing manuscript. All authors read and approved the final manuscript. We thank Dr Julian Quinn, Australia for proofreading our manuscript.

Declarations

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Conflict of interest: The authors declare that they have no competing interests.

Ethical approval: Ethical approval for this retrospective study was obtained from the Ethics Committee of the Manarat International University, Bangladesh (Memo No: MIU/ERC/16/031).

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Table 2: Maximum operations cases according to age range. The maximum undergone patient's operations with number and percentages, operation types and total operations for each age groups are presented in this table

Age Range (Year)	Maximum cases operations	Number of Operation Types	Total Number of operations
1 to 5	31.8% EUA(7), 31.8%Probing(7), 18.2%Phaco with IOL(4).	6	22
6 to 10	40% Phaco with IOL and 20% Chalazion.	6	10
11 to 15	25.7% VR Surgery, 17.1% C3R Surgery, 14.3% AVASTIN surgeries.	12	35
16 to 20	22.2% Retinal Laser, 19.4% VR Surgery, 19.4% C3R	12	36
21 to 25	24.1% Retinal laser, 7.4% YAG Laser, 7.4% C3R surgeries.	18	54
26 to 30	29.1% Avastin surgeries, 8.9% VR Surgery, 6.3% same to YAG Laser and Phaco with IOL	21	79
31 to 35	Retinal Laser(28.6%), Avastin : Intravitreal Injection (26.2%)	20	84
36 to 40	Avastin(33.6%), 19% Retinal Laser and 13.9% Phaco with IOL.	19	137
41 to 45	37.3% Avastin and 20.7% Retinal Laser.	17	217
46 to 50	39.6% Avastin : Intravitreal Injection , 21.5% Phaco with IOL and 17.4% Retinal Laser.	19	265
51 to 55	43.5% Avastin surgeries(62% M, 38% F), 23.5% Phaco with IOL(39.2%M, 60.8%), 14.6% Retinal Laser, 7.3% YAG Laser(52.2% M, 47.8% F)	15	315
56 to 60	35.6% Avastin surgeries (Total:144, 68.1% M, 31.9% F), 30.1% Phaco with IOL(Total:122, 52.5%M, 47.6%), 13.1% Retinal Laser (Total:53, 60.4% M, 39.6% F), 9.1% YAG Laser(35.1% M, 64.9%F) and 6.4% VR Surgery(69.2%M, 30.8%F).	19	405
61 to 65	30.3% Avastin : Intravitreal Injection, 12.3% Retinal laser and 10.7% YAG laser.	12	300
66 to 70	31.8% Avastin : Intravitreal Injection, 37.3% Phaco with IOL and 8.6% YAG laser.	17	220
71 to 75	24% Avastin : Intravitreal Injection, 38% Phaco with IOL and 13% YAG laser.	11	100
76 to 80	31% Avastin : Intravitreal Injection, 42.3% Phaco with IOL and 11.26% YAG laser.	9	71
81 to 85	33.3% AVASTIN : Intravitreal Injection, 44.4% Phaco with IOL and 22.2% YAG laser.	3	18
86 to 96	18.2% AVASTIN : Intravitreal Injection, 45.5% Phaco with IOL and 22% YAG laser.	5	22

Table 3: Eye operations distributions by sex according to different eye surgeries. The number and percentages of male and female, and percentage of over all operations for each category of operation is shown.

Operation Name	Female (M)	Male (F)	M+F	F%	M%	Total %
Avastin : Intravitreal Injection	287	497	784	36.6	63.4	32.8
Phaco with IOL	292	317	609	48	52.1	25.5
Retinal Laser	128	222	350	36.6	63.4	14.6
VR Surgery	62	93	155	40.0	60.0	6.5
YAG Laser	94	86	180	52.2	47.8	7.5
SOR Removal Or Vit Lavage	5	18	23	21.7	78.3	1.0
Chalazion	4	13	17	23.5	76.5	0.7
Other's	17	12	29	58.6	41.4	1.2
Pterygium Excision + Graft	0	12	12	0.0	100.0	0.5
DCR (Open)	18	10	28	64.3	35.7	1.2
Phaco + SOR	3	11	14	21.4	78.6	0.6
PST Injection	15	9	24	62.5	37.5	1.0
SICS + IOL	19	9	28	67.9	32.1	1.2
C3R	10	8	18	55.6	44.4	0.8
Pterygium Excision	2	8	10	20.0	80.0	0.4
Stitch Removal	1	6	7	14.3	85.7	0.3
VR + Phaco Surgery	6	6	12	50.0	50.0	0.5
Evisceration Surgery	2	5	7	28.6	71.4	0.3
SPT	3	5	8	37.5	62.5	0.3
SFIOL + ANT VIT	0	4	4	0.0	100.0	0.2
Squint L/A- (One Eye)	2	4	6	33.3	66.7	0.3
Trabeculectomy	2	4	6	33.3	66.7	0.3
A/C Wash	1	3	4	25.0	75.0	0.2
EUA	4	3	7	57.1	42.9	0.3
LUCENTIS : Intravitreal Injection	1	3	4	25.0	75.0	0.2
Tarsorrhaphy	1	3	4	25.0	75.0	0.2
Ptosis Surgery (Prolene)	0	2	2	0.0	100.0	0.1
R.D (BB) Surgery	0	2	2	0.0	100.0	0.1
SICS + SOR	2	2	4	50.0	50.0	0.2
Botox Injection	0	1	1	0.0	100.0	0.1
Combined / Phaco + Trab	2	1	3	66.7	33.3	0.1
Cryopexy	4	1	5	80.0	20.0	0.2
DCT	1	1	2	50.0	50.0	0.1
Extra Ocular Injury	0	1	1	0.0	100.0	0.1
Hood	0	1	1	0.0	100.0	0.1
ILO Laser	0	1	1	0.0	100.0	0.1
Other Intravitreal Injection	0	1	1	0.0	100.0	0.1
Probing	6	1	7	85.7	14.3	0.3
3 Snips Surgery	1	0	1	100.0	0.0	0.1
Laser DCR	4	0	4	100.0	0.00	0.2
Laser DCR (Repeat)	3	0	3	100.0	0.0	0.1
SICS + Trab	1	0	1	100.0	0.00	0.1
Squint L/A- (Both Eye)	1	0	1	100.0	0.0	0.1
Total	1004	1386	2390	42.0	58.0	100