International Journal of Research in Medical Sciences
Bharadwaj M et al. Int J Res Med Sci. 2017 Feb;5(2):548-550
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012

DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20170149

Original Research Article

A hospital based eye health survey to see the pattern of eye diseases in Uttarakhand, India

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Received: 28 November 2016
Revised: 31 November 2016
Accepted: 23 December 2016

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ABSTRACT

Background: The cause of blindness and low vision differs in different countries and communities. The requirements of eye services also vary according to the need of the native population. Studies showing the pattern of ocular morbidity are needed to build better infrastructure of eye care facilities.
Methods: This prospective study was conducted in eye department of Government Doon Medical College, Dehradun, Uttarakhand, India between April 2016 to May 2016.the patients were seen in eye OPD by ophthalmologists. Proper anterior and posterior segment evaluation was done and patients were treated accordingly. Data including the registration number, name of the patient, age, sex and diagnosis were recorded in OPD register and analysed.
Results: Total 1259 patients were examined. 605 were male and 654 were female. The mean age of male patients was 43 years and for females was 41.33 years. Refractive error (20.97%) was the commonest ocular morbidity in our study followed by cataract (20.02%), follow ups of cataract surgeries and allergic conjunctivitis. Besides refractive errors total 137 (10.88%) patients were presbyopic.
Conclusions: This study shows a slightly exceeding number of female patients, which shows that females are equally aware of their health problems. Refractive errors are the most common cause in present study with cataract being second, may be because of higher mean age of the patients presenting to OPD. In present study allergic conjunctivitis was third commonest cause of ocular morbidity in our district may be due to windy weather. The leading causes of ocular morbidity in our study were refractive errors, cataract, allergic conjunctivitis and, presbyopia. The high prevalence of refractive errors and cataracts shows that hospital still requires an improved infrastructure with spectacle provision to the patients

Keywords: Cataract, Conjunctivitis, Refractive error

INTRODUCTION

The causes of blindness and low vision differ in different countries and communities. The requirement of eye services also varies according to the need of the native population.

Studies showing the pattern of ocular morbidity are needed to build better infrastructure of eye care facilities, which meets all the requirements of particular population. There are limited studies about the prevalence of ocular morbidity or resulting effects over the quality of life, most of them are confined to high income countries.

A study in Pakistan found prevalence of 'non-vision impairing conditions' (NVIC) to be 30.6% including presbyopia. After excluding presbyopia, the prevalence of NVIC was 14.6% with conjunctival disorders (e.g.

allergic conjunctivitis) the leading cause.[1] Other studies conducted in developing countries had also shown that uncorrected refractive errors and presbyopia have a larger impact on quality of life.

The aim of our study was to determine the pattern of ocular diseases presenting to Doon Hospital, which is situated in the centre of the city and covers the population of remote areas of hilly regions in Uttarakhand, India.

METHODS

This prospective study was conducted in eye department of Government Doon Medical College, Dehradun, India between April 2016 to May 2016.

The patients were seen in eye OPD by ophthalmologists. Proper anterior and posterior segment evaluation was done; patients were referred to designated optometrist for refraction and were treated accordingly.

Data including the registration number, name of the patient, age, sex and diagnosis were recorded in OPD register and analysed.

RESULTS

Total 1259 patients were examined. 605 were male and 654 were female. The mean age of male patients was 43 years and for females was 41.33 years.

Table 1: Distribution based on age.

Age (in years)	Male	Female	Total
5-15	54	71	125
16-25	116	93	209
26-35	75	116	191
36-45	77	120	197
46-55	90	99	189
56-65	85	113	198
66-75	73	42	115
76-85	31	14	45
86-95	4	1	5
Total	605	654	1254

Between males and females, prevalence of refractive error is similar. (By chi square test p value is 0.293). Incidence of refractive error was significantly more in lower age group of <35 years (p value <0.05 by fisher exact test).

Cataract prevalence is similar in both males and females. The prevalence of cataract is significantly lesser in <35 years of age (p value, <0.05).

Refractive error (20.97%) was the commonest ocular morbidity in present study followed by cataract (20.02%), follow ups of cataract surgeries and allergic conjunctivitis. Besides refractive errors total 137 (10.88%) patients were presbyopic.

Table 2: Pattern of eye diseases.

Diagnosis	No. of cases
Refractive errors, presbyopia	264 (20.97%)
Cataract	252 (20.02%)
Postop	135 (10.72%)
Allergic conjunctivitis	121 (9.61%)
Pterygium	35 (2.78%)
Conjunctivitis	80 (6.35%)
Squint	15 (1.19%)
Aphakia	4 (0.30%)
Rd due to refractive error	2 (0.16%)
Bells palsy	3 (0.24%)
Cong. nld block	6 (0.48%)
Chronic dacryocystitis	10 (0.79%)
Chalazion	20 (1.59%)
Internal hordeolum	3 (0.24%)
Acute dacryocystitis	2 (0.16%)
Ossn	1 (0.08%)
Episcleritis	11 (0.87%)
Eye lid mass	7 (0.56%)
Amblyopia	15 (1.19%)
Ptosis	2 (0.16%j)
Post lasik	2 (0.16%j)
Subconj heamorrhage	8 (0.64%)
Brvo	1 (0.08%)
Stye	17 (1.35%)
Keratitis	6 (0.48%)
Pinguicula	22 (1.75%)
Corneal opacity	6 (0.48%)
Anterior uveitis	5 (0.40%)
Glaucoma	5 (0. 40%)
Ocular injury	30 (2.38%)
Psuedophakic both eyes	101 (8.02%)
Corneal opacity	7 (0.56%)
Nonspecific complaints	77 (6.12%)
Total	1259

Table 3: Age and gender wise distribution of major eye diseases.

	Male	Female	
Refractive errors	127	137	264
Cataract	130	122	252
Allergic conjunctivitis	54	67	121

Table 4: Gender wise distribution of refractive errors.

Refractive error in age group (in years)	Male	Female
≤35	74	71
>35	53	66

Table 5: Age and gender wise distribution of cataract.

Age (in years)	No. of cataract patients	No. of cataract patients
≤35	5	1
>35	125	121
	130	122

DISCUSSION

This study shows a slightly exceeding number of female patients, which shows that females are equally aware of their health problems. Other studies also shows that ocular morbidity is more common among females.[2] Refractive errors are the most common cause in present study with cataract being second, may be because of higher mean age of the patients presenting to OPD. Omotoye reported 26% of cataract in a study, similar to ours.[3] Study by Haq et al reported that refractive error was present in 25%.[4] Study by Singh et al in rural setting reported that prevalence of refractive error to be 40.8%.[5]

Second most common cause of ocular morbidity was cataract (20.02%), the prevalence of cataract is significantly lesser in <35 years of age, as it is an age related disease. Adeoye and Omotoye however reported higher figures of 26% for cataract in their study.[2] Haq et al also reported that cataract prevalence was 21.7% in their study.[4] Study by Singh et al stated that cataract prevalence was 40.4%.[5]

In present study allergic conjunctivitis was third commonest cause of ocular morbidity in our district. Many studies also supports this fact, it may be because of windy weather and exposure to pollens in densely greeny hilly regions.[3,6,7] Olukorede reported allergic conjunctivitis as a most common cause in a hospital based study.[11] Diabetic retinopathy was present in 48 patients (3.81%) of the patients.

Ocular trauma was an important cause of ocular morbidity, which shows male preponderance, similar to observations of other authors.[8-10] Out of 1259 patients 8.02% patients were pseudophakic both eyes. Most of them came for refraction and some of them came with nonspecific complaints. According to a study conducted in hilly areas of Nepal, the commonest ocular morbidity encountered after ocular examination was refractive error, followed by dry eyes, ocular allergy, cataract, degenerative conjunctival conditions, and corneal opacity etc.[12]

CONCLUSION

The leading causes of ocular morbidity in our study were refractive errors, cataract, allergic conjunctivitis, and presbyopia. A large number of OPD patients were constituted by follow ups of cataract surgeries. This shows that institute has a good infrastructure to provide surgical treatment for cataracts. (10.72%). Among 1259 patients, 101 (8.02%) were pseudophakic both eyes. This also shows good cataract surgical care. The high prevalence of refractive errors and cataracts shows that hospital still requires an improved infrastructure with spectacle provision to the patients and mobile eye care units to collect cataract patients from hilly areas for operating them in hospital. And also increased delivery of consumables is required to fulfill the needs of the patients.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Bharadwaj M, Singh LK, Dutt B. A hospital based eye health survey to see the pattern of eye diseases in Uttarakhand, India. Int J Res Med Sci 2017;5:548-50.