Analysis of Ophthalmic Examination Results of 7364 Cases in Kunming Regional Health Management Center

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Abstract: Objective To understand the distribution of eye diseases in the tested population, and to provide a reference basis for the prevention, diagnosis and treatment of eye diseases. **Methods** A total of 7, 364 patients in the Health Management Center from June 2022 to September 2022 underwent eye examination, and the statistical analysis of their eye examination results was conducted by retrospective analysis. **Results** Of the 7, 364 patients, 6, 202 cases(84. 22%) had a history of eye disease or eye surgery, and the top five eye diseases were refractive error(75. 35%), cataract(18. 06%), pterygium(4. 09%), pinguecula(3. 57%), fundus tigre(2. 70%). **Conclusion** In the tested population, the prevalence of refractive error was the highest, followed by cataract, pterygium and so on in men Blebral spot, ptosis. More cataracts and fundus arteriosclerosis, and more women suffer from corneal diseases and trichiasis. There is no obvious difference between men and women, and middle-aged and elderly people have a higher probability of cataract and fundus diseases.

Keywords: Ophthalmic Examination; Prevalence

Introduction

About 210 million people in China suffer from eye diseases, the largest in the world[1]. As one of the countries with a large number of blind people in the world, the task of eye disease prevention and treatment is arduous[2]. The health management center is the front line of eye disease screening for the physical examination population. Through the analysis of the results of the eye examination, it can better understand the situation of eye disease in the physical examination population, and provide reference for the prevention, diagnosis and treatment of eye disease.

1. Data and methods

1. 1 Data

Selected ophthalmic examination results of 7364 patients of Kunming Health Management Center from June 2022 to September 2022.

1. 2 Methods

A retrospective analysis was used to conduct the statistical analysis of the examination results.

1. 3 Specific examination

①Past history: ocular trauma and surgical history; ②vision examination; ③external eye examination: eyelid, e ye position, eye appearance, etc. ; ④slit lamp examination: conjunctiva, cornea, sclera, iris, anterior room, crystal, vitreous,etc.;⑤fundus examination: macular, optic disc, retina, etc.

1. 4 Diagnostic

Criteria are mainly based on *Ophthalmology* (3rd edition/8-year system) and *Ophthalmology* (9th edition /undergraduate clinic), and *Fundonology* (2nd edition) as reference.

2. Results

2. 1 Sex and age distribution of the subject population

Table 1 Sex and age

age	man constituent ratio [(%)]	woman constituent ratio [(%)]	amount to
Under 30	636(50. 4%)	635(49. 96%)	1271
And 31- -59 years old	2667(55. 98%)	2097(44. 02%)	4764
Over 60 years old	809(60. 87%)	520(39. 13%)	1329
amount to	4112(55. 83%)	3252(44. 16%)	7364

Of the 7364 patients, Men have 4, 112 cases(55. 83%), Women have3, 252 cases(44. 16%), Most ages were 31-59 years old(4764 cases, 64. 69%).

2. 2 Prevalence of eye diseases in the tested population

Table 2 Prevalence of eye diseases

eye disease	Number of detected cases (prevalence)
ametropia	5549（75. 35%）
Disease of cornea	55(0. 75%)
trichiasis	60(0. 81%)
pterygium	301(4. 09%)
pinguecula	263(3. 57%)
ptosis	40(0. 54%)
The new life of the eyelid	46(0. 62%)
cataract	1330(18. 06%)
postcataract	151(2. 05%)
glaucoma	12(0. 16%)
Maculopathy, and retinopathy	52(0. 71%)
Fundus artery hardening	131(1. 78%)
fundus tigre	199(2. 70%)
Postoperative myopia	145(1. 97%)
eye traumas	19(0. 26%)

In the examined population, the top five eye diseases in the prevalence rate were the refractive error 5, 549 cases (75. 35%), cataract 1, 330 cases(18. 06%), pterygium 301 cases (4. 09%), pinguecula 263 cases(3. 57%), fundus tigre 199 cases (2. 70%). In addition, other eye diseases are 55 cases of corneal diseases(0. 75%), trichiasis 60 cases(0. 81%), ptosis 40cases(0. 54%), The eyelid new organism 46 cases(0. 62%), glaucoma 12 cases(0. 16%), Macular disease, retinopathy, 52 cases(0. 71%), 131 cases of fundus arteriosclerosis(1. 78%), 19 ocular injuries (0. 26%), postcataract151 cases(2. 05%), 145 cases after myopia surgery(1. 97%).

2. 3 The relationship between the eye disease status and gender in the tested population

Table 3 Eye diseases and gender

eye disease	man constituent ratio [(%)]	woman constituent ratio [(%)]	amount to
ametropia	3063(55. 20%)	2486(44. 80%)	5549
Disease of cornea	25(45. 45%)	30(54. 55%)	55
trichiasis	29(48. 33%)	31(51. 67%)	60
pterygium	163(54. 15%)	138(45. 85%)	301
pinguecula	168(63. 88%)	95(36. 12%)	263
ptosis	28(70. 00%)	12(30. 00%)	40
The new life of the eyelid	21(45. 65%)	25(54. 35%)	46
cataract	809(60. 83%)	521(39. 17%)	1330
postcataract	87(57. 62%)	64(42. 38%)	151
glaucoma	8(66. 67%)	4(33. 33%)	12
Maculopathy, and retinopathy	27(51. 92%)	25(48. 08%)	52
Fundus artery hardening	97(74. 05%)	34(25. 95%)	131
fundus tigre	109(54. 77%)	90(45. 23%)	199
Postoperative myopia	59(40. 69%)	86(59. 31%)	145
eye traumas	14(73. 68%)	5(26. 32%)	19

With the following eye diseases, the male proportion is significantly higher than the female:eyelid fissure spot (63. 88% male, 36. 12%f emale), ptosis (70. 00% male, 30. 00% female), cataract (60. 67% male, 39. 17% female), glaucoma(66. 67% male, 33. 33% female), fundus arteriosclerosis (74. 05% male, 25. 95% female), and ocular trauma (73. 68% male, 26. 32% female).

With the following eye diseases, women accounted for higher proportion than men: corneal diseases(female54. 55%, male 45. 45%), trichiasis (female51. 67%, male 48. 33%), eyelid neobiology (female54. 35%, male45. 65%), and myopia (female 59. 31%, male 40. 69%).

2. 4 The relationship between eye diseases and age in the tested population

Table 4 Eye diseases and age

inspection result	Under 30 constituent ratio [(%)]	31-59 Years old constituent ratio [(%)]	Over 60 years old constituent ratio [(%)]	amount to
ametropia	1036(18.67%)	3505(63.16%)	1008(18.17%)	5549
Disease of cornea	10(18.18%)	24(43.64%)	21(38.18%)	55
trichiasis	15(25.00%)	33(55.00%)	12(20.00%)	60
pterygium	2(0.66%)	142(47.18%)	157(52.16%)	301
pinguecula	0	189(71.86%)	74(28.14%)	263
ptosis	2(5.00%)	8(20.00%)	30(75.00%)	40
The new life of the eyelid	7(15.22%)	32(69.57%)	7(15.22%)	46

cataract	11(0.83%)	439(33.01%)	880(66.17%)	1330
postcataract	0	14(9.27%)	137(90.73%)	151
glaucoma	0	4(33.33%)	8(66.67%)	12
Maculopathy, and retinopathy	1(1.92%)	15(28.85%)	36(69.23%)	52
Fundus artery hardening	0	23(17.56%)	108(82.44%)	131
fundus tigre	54(27.14%)	79(40.20%)	65(32.66%)	199
Postoperative myopia	34(23.45%)	111(76.55%)		145
eye traumas	3(15.79%)	12(63.16%)	4(21.05%)	19

The majority of the subjects were 31-59 years old, including those under 30 years old (27. 14%), trichiasis (25. 00%), relatively high prevalence after myopia (23. 45%). 31-59, eyelid fissure (71. 86%), eyelid organism (69. 57%). After myopic surgery (76. 55%). The prevalence rate is relatively high. Patients over 60 years, pterygium 157 (52. 16%), Pptosis(75. 00%), Cataract(66. 17%), After cataract surgery (90. 73%), Glaucoma(66. 67%), Maculopathy, retinopathy(69. 23%), The arterial stiffness of the fundus(82. 44%)The prevalence rate is relatively high.

3. Discussion

This study showed that the top five prevalence rates were refractive error (75. 35%), cataract (18. 06%), pterygium (4. 09%), pinguecula (3. 57%), Leopard grain pattern fundus (2. 70%).

Among them, men suffer from the following eye diseases more than women:eyelid fissure spot, For ptosis, cataract, glaucoma, fundus arteriosclerosis, eye trauma, the above conditions are considered to accept more ultraviolet light, faster eyelid aging, relatively poor control of basic diseases, and more vulnerable to external forces. And women suffer from more eye diseases: corneal disease, trichiasis, eyelid new biology, myopia, which is related to the relatively loose eyelid structure, hormone secretion fluctuations, more strong willingness to remove the mirror and so on factors. Most of the remaining eye diseases, there was no obvious difference between men and women.

In this study, the highest prevalence of refractive error was observed (75.35%), Leopard grain pattern fundus (2.70%). It also cannot be ignored. In this study, people under the age of 30 had the leopard pattern fundus (27.14%) relatively high, considering related to high myopia;proportion of population after myopia surgery 1. 97%, Mainly aged 30-59 (76.55%), this is related to the high cost of myopia surgery, which can bear more young and middle-aged people with stable income, and myopia surgery has certain requirements for eye conditions, so it is relatively low at present. At present, myopia is incurable, and the probability of high myopia is higher to suffer from fundus related diseases. It is urgent to protect the vision, improve the awareness of loving eyes, wear glasses correctly, and actively control the development of myopia.

Cataract ranks first among many blind eye diseases in the world. At present, China has the largest number of cataract blindness in the world[3]. In developing countries, the incidence of cataract in people aged over 40 is about 11. 8% -18. 8%[4]. The prevalence of cataract is 18. 06%, Relatively high, and the prevalence of people over 60 years old is reached 66. 17%, This is related to the plateau of Yunnan Province, with relatively strong ultraviolet light and relatively low education level;people after cataract surgeryAccounting for 2. 05%, Mainly concentrated in those over 60 years old(90. 73%), This shows that age-related cataract is still the focus of the prevention and treatment of blindness. The prevalence rate of pterygium(4. 09%) and pinguecula(3. 57%) is higher, which is also related to the above geographical location and education level of the population in Yunnan Province. Enhance the population's awareness of eye love, advocate the elderly ultraviolet protection, regular eye examination, timely cataract surgery is more key.

China has entered the aging process, and the prevalence of age-related eye diseases has increased accordingly by[5]. In this study, The prevalence of pterygium, ptosis, cataract, after cataract surgery, glaucoma, macular disease, retinopathy, and

fundus arteriosclerosis is relatively high. This is related to the elderly suffering from "three high" and other basic diseases, most of them do not realize that eye disease is closely linked with the whole body, and weak awareness of eye love. It is the key to the prevention and treatment of the elderly to enhance the understanding of fundus diseases, comprehensively manage the basic diseases, and advocate the early detection, diagnosis and treatment of the elderly, and the key to guarantee the living vision of the elderly.

4. Summary

The study showed that the prevalence of refractive errors was the highest, followed by cataract and pterygium, among menBlebral fissure spot, ptosis, More cataracts and fundus arteriosclerosis, and more women suffer from corneal diseases and trichiasis. There is no obvious difference between men and women, and middle-aged and elderly people have a higher probability of cataract and fundus diseases. China has entered an aging society, is a big country of myopia, the relevant departments and ophthalmologists, should actively advocate universal eye care, widely popularize eye love knowledge, improve the health awareness of the population, Promote the development of eye health and ophthalmology in China to benefit more patients with eye diseases.

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