https://doi.org/10.26682/sjuod.2023.26.1.9
Journal of University of Duhok., Vol. 26, No.1 (Pure and Engineering Sciences), Pp 89-100, 2023

TYPES OF REFRACTIVE ERRORS IN POPULATIONS AGED 20-40 YEARS ATTENDED DUHOK EYE HOSPITAL

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(Received: October 29, 2022; Accepted for Publication: February 19, 2023)

ABSTRACT

Background

One of the most common eye problemsare refractive errors. They occurwhen the eye cannot clearly focus the images. Which result in a blurred vision,sometimesthey are so severe that they causevisual impairment.

Aim

The study is to resolute refractive error types in 20-40 years-old population.

Methodology

300 patients aged from20 to 40 years old who attend Duhok Eye Hospital;Duhok governorate;Kurdistan including from 1st April 2022 to 1st October 2022 are included in thiscross-sectional study. Examinations of visual acuity,anterior and posterior segments were done for theparticipants and were categorized into myopia, hyperopia, and astigmatism.

Results

Myopia with astigmatism were most common type (46.50%),followed by astigmatism (26.8%) for the right eye,Myopia with astigmatism were most common type (48.3%),followed by astigmatism(26.7%) for the left eye;(59.9%) were females while (40.1%) were males;22% of patients were newly diagnosed while 78%were following up visits.

Conclusions

Decrease visual acuity due to refractive errors in young age group people has a very important impact on their lives and productivity,and also great burden on their financial status;early diagnosis and correction must be done to avoid such effects and impacts.

KEY WORDS: refractive errors,myopia,hypermetropia(hyperopia),astigmatism

INTRODUCTIONS

Refractive errors are a common eye condition,thecausesbehind that are usually either the abnormal eye power or shape the prevent the proper focusing on the retina,leading to blurry vision or decrease visual acuity, eye strain and headache.

Types of refractive errors are

a-Myopia (nearsightedness). Distant images are blurred

b-Hyperopia (farsightedness). Close images are blurred.

c.Astigmatism.Images close and at a distance appear blurry.

d-Presbyopia. Close images appear blurry by time with aging.

A refractive error might occur due to abnormal globe which could be too short or too long, abnormal corneal surface as it might be steeper or flatter than normal, or abnormal overall eye power either more or less than the focusing power needed.Diagnosis of refractive errors can be discovered by eye exam, which consists ofmeasuring visual acuity at distances, TestingRefraction to measure the correct prescription of glasses,Slit-lamp exam to exclude any other pathological causes of visual acuity impairment.Symptoms which might related to presence of Refractive Errors are Blurred vision, Headaches,Eyestrain,Squinting[1].Choices for correcting these errors include eyeglasses, contact lenses, or refractive surgery [2]. The estimated number of people suffering from this problem are one to two billion all over the world[3].The Estimated Pool Prevalence of myopia, hyperopia, and astigmatism was 11.7%,

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4.6%, and 14.9%, respectively in children[4].Uncorrected refractive error (URE) can significantly beacause of diminishing both quality of life and productivity[5].The global visual impairment burden of (URE) among adolescents remained stable without significant alleviation from 1990 to 2019. Older age and female gender were associated with a higher burden of URE,high socioeconomic development status,low primary school dropout rates and high urbanization rates were associated with increasing Disability Adjusted Life Years(DALY) rates[6].Myopia, as it is the most common eye condition having great impact on medical, social, and financial condition. High myopia may be associated with serious ocular pathologies, visual impairment and related compromised life qualityon functional, psychological,cosmetic,and financiallevels[7].Simple hypermetropia ismore common than the pathological hypermetropia[8]. The prevalence of hypermetropia is about 10%,nearly 14million peopleInthe United States. Prevalence of hypermetropia is higher comparing to myopia in 45-65 years old people[9].There is no gender difference in the prevalence of hypermetropia. Family history,maternal smoking during pregnancy, prematurity,diabetes mellitusand low birth weight are risk factors for hypermetropia, andit is associated with lower literacy standards in children.Rural areas have higher prevalence rates of hypermetropia than urban areas[10].The prevalence of astigmatism in the general population varied from 7.6% to 61.7%, with higher rates in older individuals (≥70 years) .The prevalence of astigmatism was higher for low levels (<1.5 D: 32.7%-100%) than higher levels (≥1.5 D: 0%-39.1%). Astigmatic patients experienced decreased quality of vision, increased rates of glare, halos, night-time driving difficulties,risk of falls (particularly with oblique astigmatism),and spectacle dependence leading to decreased vision-related quality of life. Astigmatic patients performed vision-related tasks slower and made more errors compared to fully corrected astigmatic patients [11].Education has been associated strongly with the risk of myopia in many studies.The association between years of education and myopia was stronger among younger than older subjects.There are no data from population-based studies of older persons that have examined the relation between hyperopia and education. However, hyperopia was more common among 20to 30years old Australian aborigines than among those of European descent who had a higher level of education.Education was not associated with astigmatism, although myopia and astigmatism each have been associated with education in previous studies of younger populations[12].Myopia prevalence is higher in girls (7.4%) than in boys (5.1%) - $p < 0.001$. Hypermetropia prevalence ishigher in boys (19.6%) than in girls (18.2%) - $p < 0.001$. Astigmatism prevalence is higher in girls (1.9%) than in boys (1.5%) was also observed ($p > 0.05$)[13].

METHODS

Study Design:it is a cross-sectional study including sample of patients who attended Duhok eye hospital for checking up and who referred by other districts clinics which do not have necessary facilities for visual acuity measuring

Participants: The sample selection was depending on the participant wishing to check up their visual acuity according to the inclusion criteria. The aimis to determine the types of refractive errors in our population, no similar studies wereheld before in our locality.

Sample Size: A 300 patients between ages 20and 40years were included in this study. We selected the patients who got benefit from visual correction. Measuring visual acuity and prescribing vision rehabilitation treatment options. Patientswho had other causes of decrease visual acuity were excluded from our study.

Procedures: Assessment of visual acuity,measuring refraction by autorefractometer and subjective refractionwere done for all participants.Visual Acuity Test was done depending on Snellen acuity chart, at 6 meters distance for the right eye occluding left eye then for the left eye occluding right eye.Ocular parts Examinations were done by ophthalmologists. After visual acuity assessment, a slit lamp (Topcon Japan) examinationwas done by an ophthalmologist. Intraocular pressure was checked up by using airpuff tonometry (CT-80; Topcon, Japan),then autorefraction (KR-8900; Topcon, Tokyo, Japan) and subjective refraction

were done byoptometrist. 6/6 is considered the best corrected visual acuity. those who did not have 6/6value were considered to have refractive errors. Who neededspherical equivalent (SE) ≤ −0.50 Diopters of optical correction werecategorized as myopic, SE ≥ +2.0. Diopters werecategorized as hypermetropic and SE of −2.00 + 3.50 × 90. Diopters werecategorized astigmatic. Group selection was as follow, myopia,myopia with astigmatism, hypermetropia, hypermetropia with astigmatism, astigmatismaccordingly.

STATISTICAL ANALYSIS

Excel spreadsheet and Statistical Package for the Social Sciences,SPSS (IBM V 23) software used to calculate the proportion of univariant variables, to summarize the descriptive data, and the relation of the proportion of gender and type of visit with and refractive errors of right and left eyes after admission tested through using Chi-square statistics, and Fisher's Exact Test (when more than 20% of cells in sub-tables have expected cell counts less than 5, or the minimum expected cell count in sub-table is less than one). The independent*t* test used to test means of age in years with gender.A*p* value of < 0.5 considered statistically significant.

RESULTS

Out of 300 patients,121were males (40.1%) and 179 were females (40.3%),the age between 20-25 years were 109(36.3%),from 26-30 years were 70 (23.3%),from 31-35 years were 65(21.7%)and from 36-40 years were 56(18.7%).

Most of patient were employed 137 (57%) ,55 (18.3%) were unemployed while72(24.0%)were students.

The residency was as follow ;26(8.7%) from AKRE,176(58.7%)from DUHOK,35 (11.7%) from SEMEL,11(3.7%)from SHINGAL, and 52 (17.3%) from ZAKHO (Table 1).

Those patients usually have clinical symptoms like headache and eye strain so they come for checking their eyes; when there is a change in refraction they may suffer from same symptom,some of them comes for regular follow up.

66(22%) patients were diagnosed having refractive errors for the first time while 234(78%)visited the hospital for following up(Table2).

The types of refractive errors found in the right eyes of 300 patients were as follow,80(26.8%) had astigmatism,19(6.4%) had hypermetropia,18(6.0%) had hypermetropia with astigmatism,40(13.4%)had myopia,139(46.5%)had myopia with astigmatism and that type was the commonest ,3 (1.0%) were normal eyes and did not need correction(Table3).

The types of refractive errors found in the left eyes of 300 patients were 80(26.7%) had astigmatism,25(8.30%) had hypermetropia,14(4.7%) had hypermetropia with astigmatism,31(10.3%) had myopia,145(48.3%) had myopia with astigmatism which was the commonest type,5(1.7%) were normal eyes and did not need correction(Table4).

There was no significant difference between the right and left eyes in the frequency of refractive error types(Table5).

The relationship between gender and refractive errors of the right eye revealed that 80(26.8) patients who had astigmatism,44(55.0%) were females; 36 (45.0%) males,19 (6.4%)patients who had hypermetropia 14(73.7%)were females;5(26.3) males,18(6.0%) patients who had hypermetropia with astigmatism 13(72.2%)were females;5(27.8%) males, 40 (13.4%)patients who had myopia 24(60.0%) were females; 16(40.0%) males, 139 (46.5%)patients had myopia with astigmatism ;83(59.7%)were females; 56(40.3%) males and the difference was not significant (Table7).

The relationship between gender and refractive errors of the left eye revealed that 80(26.7) patients who had astigmatism,48(60.0%) were females ; 32(26.7%) males,25 (8.3%)patients who had hypermetropia 18(72.0%)were females;7(28.3) male,14(4.7%) patients who had hypermetropia with astigmatism ,8(57.1%)were females;6(42.1%) males, 31(10.3%)patients who had myopia 17(54.8%) were females; 14(45.2%) males, 145 (48.3%)patients had myopia with astigmatism ;84(57.9%)were females; 61(42.1%) males and the difference was not significant (Table8).

The relationship between the type of visit and refractive errors for the Right eye appeared as follow, 80 (26.0%) of patient with

astigmatism;20(25%) were diagnosed for the first time,60(75%) were following up visit;19(6.4%) of patients with hypermetropia for 5(26.3%) were first visit, 14(73.7%)were following up visit;18(6%) of patients with hypermetropia and astigmatism for 5(27.8%) w first visit,13(72.2%) were following up visit;40 (13.4%) of patients with myopia for 10(25%) were the first visit,30(75%) were following up visit;139(46.5%) patients with myopia and astigmatism for 24(17.3%)were the first visit 115(82.7%) were following up visit(Table9).

The relationship between the type of visit and refractive errors for the left eye appeared as follow;80 (26.7%) of patient with astigmatism;21(26.3%) were diagnosed for the first time,59(73.8%) were following up visit;25(8.3%) of patients with hypermetropia for 6(24%) were first visit,19(76.0%)were following up visit;14(4.7%) of patients with hypermetropia and astigmatism for 6(42.9%) w first visit,8(57.1%) were following up visit;31(10.3%) of patients with myopia for 11(35.5%) were the first visit,20(64.5%) were following up visit;145(48.3%) patients with myopia and astigmatism for 20(13.8%)were the first visit 125(86.2%) were following up visit(Table10).

PATIENTS CHARACTERISTICS

Table (1): Frequency and Percent of Demographic Characteristics of Patients (n=300) Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

		Frequency	Percent
Gender	Female	179	59.7
	Male	121	40.3
Age group	20 - 25 Years	109	36.3
	26 -30 Years	70	23.3
	31 - 35 Years	65	21.7
	36 - 40 Years	56	18.7
Occupation	Employed	173	57.7
	Unemployed	55	18.3
	Student	72	24.0
District of Residency	AKRE	26	8.7
	DUHOK	176	58.7
	SEMEL	35	11.7
	SHINGAL	11	3.7
	ZAKHO	52	17.3
Total		**300**	**100.0**

Table (2): Frequency and Percent of Patients (n=300) by Type of visit Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

		Frequency	Percent
Type of visit	First visit	66	22.0
	Follow up visit	234	78.0
	Total	**300**	**100.0**

REFRACTIVE ERRORS

Table (3): Frequency and Percent of Patients (n=300) by Types of Refractive errors - Right EyeAttended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

Refractive errors - Right Eye		**Frequency**	**Percent**
Types (n=299, exclude one lost eye)	Astigmatism	80	26.8
	Hypermetropia	19	6.4
	Hypermetropia with Astigmatism	18	6.0
	Myopia	40	13.4
	Myopia with Astigmatism	139	46.5
	Normal	3	1.0
Total		**299**	**100.0**

Table (4): Frequency and Percent of Patients (n=300) by Types of Refractive errors - Left Eye Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

Refractive errors - Left Eye		**Frequency**	**Percent**
Types	Astigmatism	80	26.7
	Hypermetropia	25	8.3
	Hypermetropia with Astigmatism	14	4.7
	Myopia	31	10.3
	Myopia with Astigmatism	145	48.3
	Normal	5	1.7
	Total	**300**	**100.0**

Table (5): Frequency and Percent of Patients (n=300) by Types of Refractive errors – Right and Left Eyes Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

Refractive errors	**Right Eye***		**Left Eye**		**McNemar-Bowker Test**	**df**	**Sig. < 0.05**
	Frequency	Percent	Frequency	Percent			
Astigmatism	80	26.8	80	26.7	**14.4**	**11**	**.212**
Hypermetropia	19	6.4	25	8.3			
Hypermetropia with Astigmatism	18	6.0	14	4.7			
Myopia	40	13.4	31	10.3			
Myopia with Astigmatism	139	46.5	145	48.3			
Normal	3	1.0	5	1.7			
Total	299	100.0	300	100.0			

* 1 Lost eye

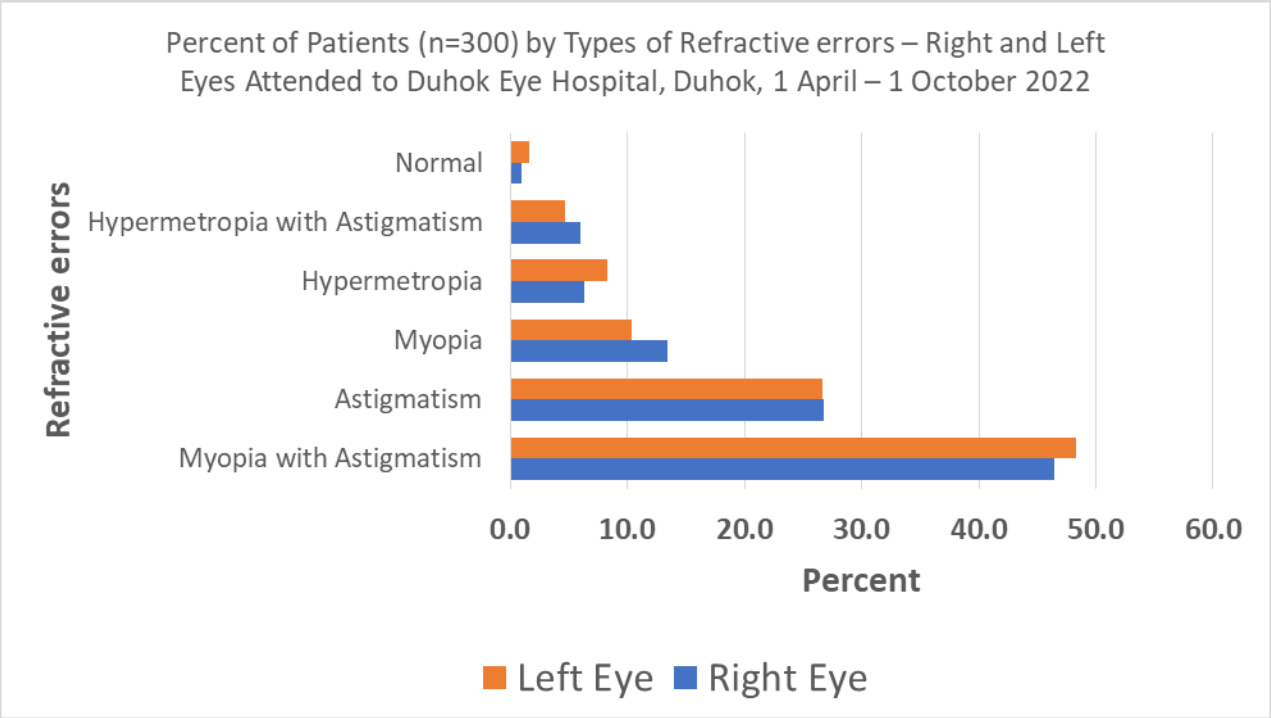

Fig. (1): Percent of Patients (n=300) by Types of Refractive errors – Right and Left Eyes Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

Descriptive statistics

Table (6): Descriptive Statistics of Patients (n=300) by gender Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

Descriptive statistics		Gender		*t*	Sig. < 0.05	Mean Difference	95% Confidence Interval of the Difference	
		Female	Male				Lower	Upper
Mean		28.91	28.87	0.050	0.960	0.037	-1.426	1.501
95% Confidence Interval for Mean	Lower Bound	27.98	27.72					
	Upper Bound	29.83	30.01					
Median		28.00	30.00					
Std. Deviation		6.283	6.373					
Minimum		20	20					
Maximum		40	40					
Range		20	20					
Interquartile Range		11	13					

Relationship between gender, type of visit and Refractive errors

Table (7): Relationship between gender and Refractive errors - Right Eye of Patients (n=299) Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

	Refractive errors - Right Eye	Gender		Total *n* (%)	Fisher's Exact Test	Sig. < 0.05
		Female *n* (%)	Male *n* (%)			
Types	Astigmatism	44 (55.0)	36 (45.0)	80 (26.8)	**4.274**	**0.514**
	Hypermetropia	14 (73.7)	5 (26.3)	19 (6.4)		
	Hypermetropia with Astigmatism	13 (72.2)	5 (27.8)	18 (6.0)		
	Myopia	24 (60.0)	16 (40.0)	40 (13.4)		
	Myopia with Astigmatism	83 (59.7)	56 (40.3)	139 (46.5)		
	Normal	1 (33.3)	2 (66.7)	3 (1.0)		
Total		179 (59.9)	120 (40.1)	299 (100)		

Table (8): Relationship between gender and Refractive errors - Left Eye of Patients (n=299) Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

	Refractive errors - Left Eye	Gender		Total *n* (%)	Fisher's Exact Test	Sig. < 0.05
		Female *n* (%)	Male *n* (%)			
Types	Astigmatism	48 (60.0)	32 (40.0)	80 (26.7)	**2.845**	**0.734**
	Hypermetropia	18 (72.0)	7 (28.0)	25 (8.3)		
	Hypermetropia with Astigmatism	8 (57.1)	6 (42.9)	14 (4.7)		
	Myopia	17 (54.8)	14 (45.2)	31 (10.3)		
	Myopia with Astigmatism	84 (57.9)	61 (42.1)	145 (48.3)		
	Normal	4 (80.0)	1 (20.0)	5 (1.7)		
Total		**179 (59.7)**	**121 (40.3)**	**300 (100)**		

Table (9): Relationship between Type of Visit and Refractive errors - Right Eye of Patients (n=299) Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022

	Refractive errors - Right Eye	Type of visit		Total *n* (%)	Fisher's Exact Test	Sig. < 0.05
		First visit *n* (%)	Follow up visit *n* (%)			
Types	Astigmatism	20 (25.0)	60 (75.0)	80 (26.8)	**6.604**	**0.226**
	Hypermetropia	5 (26.3)	14 (73.7)	19 (6.4)		
	Hypermetropia with Astigmatism	5 (27.8)	13 (72.2)	18 (6.0)		
	Myopia	10 (25.0)	30 (75.0)	40 (13.4)		
	Myopia with Astigmatism	24 (17.3)	115 (82.7)	139 (46.5)		
	Normal	2 (66.7)	1 (33.3)	3 (1.0)		
Total		**66 (22.1)**	**233 (77.9)**	**299 (100.0)**		

Table (10): *Relationship between Type of Visit and Refractive errors - Left Eye of Patients (n=300) Attended to Duhok Eye Hospital, Duhok, 1 April – 1 October 2022*

Refractive errors - Left Eye		Type of visit		Total *n* (%)	Fisher's Exact Test	Sig. < 0.05
		First visit *n* (%)	Follow up visit *n* (%)			
Types	Astigmatism	21 (26.3)	59 (73.8)	80 (26.7)	**14.963**	**0.007**
	Hypermetropia	6 (24.0)	19 (76.0)	25 (8.3)		
	Hypermetropia with Astigmatism	6 (42.9)	8 (57.1)	14 (4.7)		
	Myopia	11 (35.5)	20 (64.5)	31 (10.3)		
	Myopia with Astigmatism	20 (13.8)	125 (86.2)	145 (48.3)		
	Normal	2 (40.0)	3 (60.0)	5 (1.7)		
Total		**66 (22.0)**	**234 (78.0)**	**300 (100.0)**		

DISCUSSION

Refractive errorsare recognized as one of the most important causes of correctable visual impairments[14],they present in all ages, according to WHO reports the refractive errors are the first cause of visual impairment andthe second cause of visual loss worldwide,43% of visualimpairments causes are related to refractive errors [15].

Uncorrected refractive errors causedvisual impairment in 101.2 million people and blindness in 6.8 million people[16],genetic background and environmental factors play a role in the prevalence among different populations [17].

This study determinedtypes of different refractive errors in adults of age 20–40years whovisited Duhok eye hospital,(36.3%) of patients among all 300 patients ages were from 20-25 years;23.3% of patients ageswere 26-30;21.7% patients ages were 31-35 years while 18.7 % patients ages were from 36-40 years,over the last few yearsvisual acuity of young people has been affected by technological changes. Digital generations have the highest myopia rate comparing to previous generations[18].

In this study the percentage of patients from Duhok was 58.7 %while from thedistricts was 41.3%;this was the first study done in our locality regarding this subject.

Although the prevalence of correctable refractive errors was higher in urban population more than rural population, patients wearing glasses were more in urban people than rural people,that might berelated to the presence of medical and ophthalmological services availability[19].

Our study showed that 57.7% of patients were employed,24% were students,18.3%were unemployed,a study held in Afghanistan;Refractive errorswere prevalent among medical students, myopia was the most common type of refractive errors and there were no gender differences [20].Thefemale patients with refractive error were more than males across different studies. Our study empowered that results as the percentage of females were 59.9%while males were40.3%[21].The types of refractive errors we found in our study from the most common to leastcommon fortherighteyeweremyopiawithastigmatism(46.5%),astigmatism(26.8%),myopia(13.4%),hypermetropia (6.4%)and hypermetropia with astigmatism(6%)For the left eye myopia with astigmatism were the most common type(48.3%)followed byastigmatism(26.7%),myopia(10.3%),hypermetropia (8.3%) then hypermetropia with astigmatism (4.7%) which was the least common,no significant difference found between the right and left eye.Astudy showed that the prevalence rates of myopia ranged from 50.6% to 53.0% from 2009 to 2013[22].High educational levels are associated with myopia in adolescents [23],that may be caused by long time of near work activities which is a risk factor of developing myopia[24].Annually,the economic burden of uncorrected myopia, is estimated to be US $202 billion [25].Prevalence of hypermetropiaincreased with age from 13.2% in twenties to 17.4% in forties,middle-aged females have the highest rate of hypermetropia

(20.1%)[26],The prevalence of moderate hypermetropia in childhood is 13.2% and 5.0%, respectively, White race affected morethan other ethnic categories[27].

both eyes are involved in 64.4% of hypermetropia cases[28].Prevalence of hypermetropia was higher in females of 15 years old or less and 30 years old or more [29].The prevalence of hypermetropia is 4% in the population, it is more in young boys than girls[30].Hypermetropia is the most common refractive error with astigmatism in people more than 60 years old[31].

Astigmatism is the second most common refractive error. Low degrees of astigmatismarepresented in 61.3% patients.Myopic astigmatism(43.9%) is more common than hypermetropic (29.5%) or mixed(26.6%), simple myopic astigmatism is more common in young (21 -40 years) females 93(67.9%) than males 47(48.0%). Higher proportion of females(67.1%)among moderate grade astigmatism as compared to thosein low grade astigmatism (43.8%) [32].

The percentage of follow up visits was 78%and the newly diagnosed cases percentage was only 22%,that reflect the burden on both patient and the hospital,uncorrected refractive errors also play an essential role in decreasing the productivity of patients especially our target age group.The economic burden of vision loss and eye disorders among the United States population younger than 40 years was$ 27.5billion in 2012 including$5.9billion for children and$21.6billion for adults from 18 to 39 years of age. Direct costs were$14.5 billion, including $7.3 billion in medical costs for diagnosed disorders,$4.9 billion in refraction correction, $0.5 billion in medical costs for undiagnosed vision loss, and$ 1.8 billion in other direct costs. Indirect costs were $13 billion, primarily because of 12.2$ billion in productivity losses[33].

CONCLUSION

Among the refractive errors myopia and astigmatism arecommon between 20 and 40 years of age with femalepreponderance. This being the economically productiveage group needs special attention for early detection ofrefractive errors so that they can be effectively correctedto regain normal vision and prevent morbidity. For that reason, theneed for screening at this age group should be emphasized.

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Article initiated by:Nathan Carpenter, A. Paula Grigorian, MDAll authors and contributors:A. Paula Grigorian, MDAssignededitor:Alain Saad, MDReview:Assigned status Update Pending by A. Paula Grigorian, MD on January 6, 2015.eyewiki aaa hyperopia

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پوختە

باکگراوند

هەڵەی تێکشکان نارێکی چاوی زۆر باوە. کاتێک روودەدات کە چاو ناتوانێت بەڕوونی سەرنج بداتە وێنەکان. ئەنجامی هەڵە شکانەکان دیمەنێکی تاریکە، کە هەندێک جار زۆر تونده کە دەبێتە هۆی پەککەوتەی بینراو.

ئامانج

ئامانجی ئەم لێکۆڵینەوەیە دەستنیشانکردنی جۆرەکانی هەڵەی شکان لە نێوان دانیشتوانی تەمەن 20-40 ساڵدایە.

میتۆدۆلۆجی

لە 1ی نیسانی 2022 بۆ 1ی تشرینییەکەمی 2022 بۆ 1ی تشرینییەکەمی ساڵی 2022 لە نەخۆشخانەی چاوی دەۆک لە هەرێمی کوردستان، لە 300 نەخۆش کە تەمەنیان لەنێوان 20 بۆ 40 ساڵیدایە هەموو نەخۆشەکان پشکنینیان کرد لە ئاستی بینراو، پێوەرێکی خۆکار، تاقیکردنەوەی بەشی پێشەوەو پشتەوە و بە پێی نووسین گروپ کران، واتە میۆپیا، هایپۆپیا، ئەستیگماتیزم.

ئەنجامەکان

میۆپیا لەگەڵ ئاستیگماتیزمیەکێک بوو لە باوترین جۆرەکانی (46.50٪)، دوای ئەوە ئەستیگماتیزم (26.8٪) بۆ چاوڕاست، میوپیای با ستیگماتیسم (48.3٪) و 26.7٪ی نەخۆشیی (26/7٪) بۆ چاوی چەپی، (59.9٪) مێینە لە کاتێکدا (40.1٪) نێرین، 22٪ لە نەخۆشەکان تازە دەستنیشان کراون، 78٪ پیریی و سەردانی کردن.

ئەنجام

کەمکردنە وە ی توانای بینراو بەهۆی هەڵەی خراپە وە لە خە لک لە گرووپی تەمەنە گەنجە کان کاریگەری زۆر گرنگی لە سە ر ژیان و بەرهەمە کە یان هە روە ها بارێکی گرنگ لە سە ر باری ئابووریان نیشان دە دا، بۆ ئە وە ی کە لە و جۆرە کاریگەریە کان زوو دەستنیشان و ڕاستکردنهوە بکرێت.

الخلاصة

الخلفية

الخطأ الانكساري هو اضطراب شائع جدا في العين. يحدث عندما لا تستطيع العين تركيز الصور بوضوح. نتيجة الأخطاء الانكسارية هي عدم وضوح الرؤية ، والتي تكون في بعض الأحيان شديدة لدرجة أنها تسبب ضعف البصر.

الهدف

هدف هذه الدراسة إلى تحديد أنواع الخطأ الانكساري بين السكان الذين تتراوح أعمارهم بين 20-40 عامًا.

المنهجية

دراسة مقطعية شملت 300 مريض تتراوح أعمارهم بين 20 و 40 عامًا في مستشفى دهوك للعيون ، محافظة دهوك ، كردستان من 1 أبريل 2022 إلى 1 أكتوبر 2022. خضع جميع المرضى لفحص حدة البصر ، ومقياس الانكسار الذاتي ، وفحص الجزء الأمامي والخلفي وتم تجميعهم وفقًا لكتابة ، أي قصر النظر ، ومد البصر ، والاستجماتيزم.

النتائج

كان قصر النظر مع اللابؤرية من أكثر الأنواع شيوعًا (46.50٪) ، يليه اللابؤرية (26.8٪) للعين اليمنى ، كان قصر النظر مع اللابؤرية من النوع الأكثر شيوعًا (48.3٪) ، يليه اللابؤرية (26.7٪) للعين اليسرى ؛59.9) ٪ (٪ (من الإناث بينما (40.1٪) من الذكور ؛ 22٪ من المرضى تم تشخيصهم حديثًا بينما 78٪ كانوا زيارات متابعة.

الاستنتاجات

إن تقليل حدة البصر بسبب الأخطاء الانكسارية لدى الأشخاص في الفئة العمرية الصغيرة له تأثير مهم للغاية على حياتهم وإنتاجيتهم ؛ كما أنه يمثل عبئًا كبيرًا على حالتهم الاقتصادية ؛ يجب إجراء التشخيص المبكر والتصحيح لتجنب مثل هذه الآثار.