циентов, кашель — 3 (10 %) пациента, афония у 2 пациентов, затруднение глотания у 2 (7 %) пациентов. 25 (87 %) пациентов предъявили жалобу на затруднение носового дыхания.

Выводы

1. У 30 человек в 100 % случаев выявляется патология носовой полости и околоносовых пазух: у 100 % пациентов искривление носовой перегородки, у 100 % — хронический ринит, у 9 (30 %) пациентов — хронический синусит.

2. Учитывая наличие патологии носа и околоносовых пазух у пациентов с хроническим гиперпластическим ларингитом, как облигатного предракового заболевания рекомендовано хирургическое лечение — санация полости носа и околоносовых пазух с целью восстановления функции носового дыхания и улучшения эффекта от проводимой консервативной и хирургической терапии.

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HIGH MYOPIA AND ASTIGMATISM (CLINICAL SITUATION)

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Introduction

When the error of nearsightedness is higher than -6.0 Diopters, it is considered to be High myopia [2]. Most common forms are axial myopia, increase in antero-posterior length of the eyeball and curvatural myopia, increase in the curvature of the cornea [1, 2]. About 2 % of the population is affected from high myopia [1].

Astigmatism is a refraction error which cause by change of shape of the cornea from the norm or the irregular formation of lens of the eye. There are 2 types of astigmatism: regular astigmatism and irregular astigmatism. According to severity of astigmatism; mild astigmatism less than -2.00D, moderate astigmatism 2.00D to 4.00D and severe astigmatism more than 4.00D [3].

In both high myopia and astigmatism focusing light into the retina is failed and this will lead to form blurry, fuzzy and distorted vision [4,5].

Goal

Qualitative research to understand a rare case of High myopia which is present along with astigmatism. Furthermore, to discuss about the possible complications and how to make corrections for the refractive errors

Material and method of research

We searched the articles about the recent studies which describe both high myopia and astigmatism in NSCID, WEBMD, PubMed, Medline, and the Web of Science, Plano, American academy of ophthalmology. The case study which includes the clinical picture, anamnesis, visual acuity (VA), autorefractometry and test for retinal correspondence (Worth Four Dot Test).

The results of the research and their discussion

The study included an anamnesis, data from the clinical examination of 24-year-old female patient (Colombo, Sri Lanka) who has no family history of high my-

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opia or astigmatism. Congenital myopia is more likely to develop higher degree of nearsightedness [6, 7]. Similarly in this case, the patient was first diagnosed in 3 years old. Presence of convergent strabismus and several behavioral changes such as stressing out eyes to see objects, persons and watching television in a very short distance are the first complaints of the patient.

In 2001 VA count fingers (CF). The first prescription for the right eye (OD): sphere (sph) -13.00D, cylinder (cyl) -2.50D, axis (ax) 10. For the left eye (OS); sph — 11.00D, cyl — 2.50D, ax 170. VA with correction in both eyes 6/30.

In 2002 Spherical power in both eyes -13.00D, cylinder power has increased up to -4.00D, axis in right eye changed to 15 and left eye to 165 with visual acuity in both eyes. Annually, the refraction powers were checked and there are only slight changes in the spherical power. VA with correction in both eyes 6/15.

By the age of 18 to 21 years, general growth of a female gets stabilized. Likewise, in this female patient, from 18 years (2016) to 23 years (2019)), VA remained as 6/9, there is no change in prescription: OD sph -15.50D, cyl -4.00D, ax 25; OS sph — 16.50D, cyl — 4.00D, ax 155. But in 2021, the right eye increased its spherical power to -17.00D, cylinder decreased to -3.00D,and left eye increased up to -16.50D, cylinder decreased to -3.75D but the axis is same with a VA 6/6 as same as a normal person in both eyes. According to the latest results, there is no change in spherical power in both eyes, the cylinder in right eye remains the same while left eye cylinder power decreased to -3.25D and slight change in axis as right eye 20 and left eye 157 with visual acuity 6/7.5.

According to the Worth Four Dot Test [11], the patient have abnormal retinal correspondence (ARC), which provide the evidence that the individual manifest diplopia.

The mean adult values for axial length are 22-24mm but in case of high myopia anterior-posterior length greatly increased, forming the final image in front of the retina [8]. Similarly in this case, axial length of OD is 31.7mm, OS is 30.8mm.

To correct both high myopia and astigmatism present in the individual, spectacles and contact lenses can be used. Since childhood, patient used spectacles because it is more convenient to use and it has provided the ability to perform activities as a healthy person. Visual field is limited when using spectacles, but in the contact lenses the field of view is not affected. The contact lens is placed on the eye; therefore, it is able to provide more clarity in the image [15].

In 2018, patient used the soft contact lens with the combination of spectacles. Contact lens with spherical power -15.75D in the right eye and -15.50D in the left eye. The remaining astigmatism is corrected with spectacles, right eye; Plano, cylinder -2.00D, axis 20 and left eye; Plano, cylinder -2.00D, axis 160.Due to the difficulty in handling the patient has not continued using this method.

The gas permeable hard lens has the ability to correct both high myopia and the moderate astigmatism and provide sharper vision than soft contact lens. Using the rigid gas permeable lens, also can slow the progression of the myopia over time. LASIK is a corrective surgery which is widely used to correct high myopia but, in this patient, it is not possible to carried out the surgery since the surgery is indicated for spherical power -10.00D to -12.00D [16] and this individual has spherical power higher than -16.00D in both eyes with moderate astigmatism. Phakic IOL is the implantation of artificially made lens, permanently without removing the natural lens which is also known as implantable collamer lens (ICL) [17]. Since the patient is with higher degree of myopia, has higher risk of complications. All of the patients in the > -10D group who has done ICL surgery, lost 2 lines of best-spectacle-corrected visual acuity (BSCVA). Furthermore, all of the patients requiring cataract extraction in the > -10D myopia group, required secondary surgery to reposition the ICL [18].

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Conclusions

The 24-year-old, female patient has congenital myopia with higher degree of nearsightedness and moderate astigmatism which remains with unknown cause. Since the diagnostic age (3 years old), till now, there is only -4.00D spherical power change occurred in both eyes, which explains that the progression of the nearsightedness is not that severe. The cylinder power changes over time are insignificant, therefore the patient has stable moderate astigmatism. The right eye shows slight changes of axis compared to the left eye. The visual acuity of the patient is in good condition that is almost similar to a healthy adult. Due to the high axial length in both eyes, extremely thinning of the retina, has higher risk of developing complications. Currently with the use of spectacles, the patient has the ability to perform activity in the capacity of healthy adult. The rigid gas permeable lens has the ability of correcting both refractive errors and improves the quality of life and slow down the progression of myopia. As the patient is not a candidate to LASIK, the only optical surgery that can correct this condition is ICL. But the patient has higher risks of post complication of the surgery.

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