



REFRACTIVE ERRORS AND THEIR MODERN DIAGNOSIS

1. Boboyev Siyavush Saidavzalzoda
2. Toshtemirova Zuxra Maruf qizi
3. Toshtemirova Fotima Maruf qizi
4. Makhmudova Intizor Abdurauf qizi

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Abstract: Refractive errors, such as myopia, hyperopia, and astigmatism, are the most common eye disorders. They can significantly impair the quality of life for patients, especially if not detected and treated in a timely manner. In this article, we will discuss modern methods of diagnosing refractive errors that help provide accurate determination of the degree and nature of these conditions. Special attention is given to automated diagnostic methods, such as computerized tomography, optical coherence tomography, and autorefraction.

Key words: credit module, engineering, higher education, personnel, semester, labor, specialist, student, cargo.

¹ Department of Ophthalmology,
Samarkand State Medical University

^{2,3,4} 5th year student of the Faculty of
Treatment, Samarkand State Medical
University

Introduction:

Refractive errors of the eye involve abnormalities in the eye's focusing system, leading to errors in the focusing of light rays on the retina. These errors can be inherited, develop with age, or arise due to trauma or eye conditions. Early diagnosis and correction of these errors are important aspects of preserving visual function in patients.

Diagnostic Methods:

1. Refractometry: This method allows for the measurement of eye refraction and determination of the degree and nature of the errors. Modern automated refractometers have high accuracy and provide quick results.
2. Computerized Tomography of the eye: This method provides detailed imaging of eye

structures and can be used to assess its shape and size. Computerized tomography can also help identify possible anomalies, such as fixed positional formation or changes in corneal shape, which may be associated with refractive errors.

3. Optical Coherence Tomography: This method provides cross-sectional images of the eye's fundus and allows for visualization and measurement of retinal thickness, choroidal thickness, and other eye structures. Optical coherence tomography can be useful in evaluating the condition of the eye's axis and identifying factors that influence refraction.

4. Autorefraction: This method automatically and non-invasively measures eye refraction and can detect difficulties in focusing when viewing distant and close objects.

Autorefractometry is particularly useful in children and individuals with developmental abnormalities.

Conclusions:

Modern diagnostics of refractive errors play an important role in detecting and correcting these disorders. Automated methods, such as computerized tomography, optical coherence tomography, and autorefractometry, provide more accurate results and are convenient for patients. Early diagnosis of refractive errors allows for appropriate treatment and prevention of disease progression, which in turn improves visual function and quality of life for patients. Further research in this area will help develop even more effective methods of diagnosing and correcting refractive errors of the eye.

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