

EARLY DETECTION OF EYE DISEASES IN GENERAL PRACTICE

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Abstract: Most of the time general practitioners are the first to face an ophthalmologic complaint of a patient. Many of the eye diseases are more easily treated when caught in early stages and this brings up the importance of their early detection. However, the patient often does not have any complaints at the beginning of an eye disease, and does not know that he needs to see a specialist. Here comes the role of general practitioners who can look for risk factors and take part in eye screening. **Objective:** The aim of the study was to assess the knowledge of general practitioners about the risk factors for eye diseases and their readiness to take part in screening of eye diseases. **Methods:** Thirty randomly selected general practitioners were given written questionnaires **RESULTS:** 67% of the general practitioners that took part in the survey think that they know most of the risk factors for eye diseases and they also proved that knowledge of the most important ones in an open – ended question. Many general practitioners are confident and willing to take part in screening for eye diseases. **Conclusion:** General practitioners can play a significant role in early detection of eye diseases. They should be encouraged to look for risk factors and be included in screening programs.

Key words: general practitioner, risk factors, screening

BACKGROUND

Most of the time general practitioners are the first to face an ophthalmologic complaint of a patient. They can have a significant impact on their patients' visual health by screening for vision problems, aggressively controlling known risk factors for visual loss and by timely referral of specific patient populations to qualified eye care professional. (10) They can ensure that appropriate patients are screened for common serious eye diseases, such as glaucoma, and that patients with vision problems are assessed for treatable conditions, such as cataracts or refractive error.

OBJECTIVE

The aim of the study was to assess the knowledge of Bulgarian general practitioners about the risk factors for eye diseases and their readiness to take part in their screening

METHODS

Thirty randomly selected general practitioners were given written questionnaires. They included 10 different questions, 9 of which were closed, and one was open. The first 5 questions included passport information. The other 4 closed questions had yes or no option.

RESULTS

Results from the investigation show that 46 % of the participants were male, and 54% female. 66% were general medicine residents, and 24 % were specialists. The average work experience was between ten and twenty years and nearly half of them were between 35 and 45 year-old. 65% were working in towns and 35% in the village.

There are many risk factors for the vision that general practitioners should be aware of. For example hypertension has profound effects on various parts of the eye. It results in a series of retinal microvascular changes called hypertensive retinopathy. Furthermore, hypertension is one of the major risk factors for development and progression of diabetic retinopathy. In addition, several retinal diseases such as retinal vascular occlusion (artery and vein occlusion), retinal arteriolar emboli, macroaneurysm, ischemic optic neuropathy and age-related macular degeneration may also be related to hypertension.(3)

Data from population-based surveys indicate that one in 40 adults older than 40 years has glaucoma with loss of visual function, which equates to 60 million people worldwide being affected. Even in developed countries, half of glaucoma cases are undiagnosed. Glaucoma is mostly asymptomatic until late in the disease when visual problems arise. Vision loss from glaucoma cannot be recovered(12). Risk factors associated with open-angle glaucoma are higher age(over 40 years) and positive family history, myopia over 4 dioptries.(5) Vascular risk factors are also assessed for associations with glaucoma- like migraine, hypertension, (1), diabetes. Glaucoma is a common, insidious cause of blindness in the general population, especially in older patients. (2)Although much is still unknown about the symptoms and pathogenesis of this group of ocular diseases, primary care physicians can make a major difference in reducing vision loss by identifying high-risk patients at an early stage of disease (10)

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Age-related macular degeneration is a late-onset, neurodegenerative retinal disease. Aging, hypercholesterolaemia, hypertension, obesity, arteriosclerosis, and smoking are risk factors associated with age-related macular degeneration. (8)

Refractive errors are one of the leading causes of visual impairment in children. The analysis reveal that family history of refractive error and hours of near-work are significantly associated with their occurrence. (14)

Diabetes mellitus is associated with microvascular complications, such as diabetic retinopathy which presents in more than 77% of patients with DM type 2 who survive for over 20 years with the disease. Many factors have been associated with the progression and severity of DR, such as its duration, the control of serum glucose levels, hypertension and gender. (7) According to an investigation made in Australia, 2011, people with diabetes with higher Body Mass Index and larger neck circumference are more likely to have DR and more severe stages of DR. (4)

In the written questionnaires that we gave to general practitioners, they were asked if they knew the most common risk factors for eye diseases and 67% of them answered yes. They proved their knowledge of the most important ones in the open – ended question, in which they were asked to list the ones they knew. 73% of the general practitioners pointed out at least diabetes or hypertension as risk factors for the vision, 52% have pointed out both risk factors. 37% knew some of the other risk factors as well like family history of eye diseases, smoking cigarettes, working environment and aging. 27% didn't list a single risk factor.

Population-based data from Baltimore have indicated that a significant proportion of people with undiagnosed ocular disease in the community are regular users of general medical services. This, combined with the high prevalence of chronic medical disorders known to be risk factors for ocular disease in such clinics, makes them an attractive site for screening. (13)

Timely identification and treatment of eye diseases can substantially reduce the incidence and prevalence of visual disability. Optimizing management of systemic diseases, such as diabetes, hypertension, and hyperlipidemia, significantly reduces the risk of related eye disorders. (11)

Family physicians have an essential role in assessing, identifying, treating, and preventing or delaying vision loss in the aging population. Approximately one in 28 U.S. adults older than 40 years is visually impaired. Adults older than 65 years should be screened for vision problems every one to two years, with attention to specific disorders, such as diabetic retinopathy, refractive error, cataracts, glaucoma, and age-related macular degeneration. (9)

Having in mind the importance of early screening for eye diseases in general practice, we asked the participants in the survey if they actively searched for risk factors for eye diseases and 63% of the general practitioners declared that they did. 63% thought that their ophthalmology training is good enough to take part in screening programs for early detection of eye diseases and 67% of the participants were willing to take part in such screening programs as well.

DISCUSSION

According to this investigation quite a significant part of Bulgarian general practitioners are aware of the risk factors of eye diseases and actively look for them. However, they don't know many of the risk factors, and some of them have no information at all. As in many cases the general practitioner is the first and only physician to meet the patient their part is essential in early screening and the lack of knowledge should be decreased in all possible ways.

CONCLUSION

Family physicians and their patients should be provided with more information about the risk factors for eye diseases in order better prevention of eye diseases to be performed. As most of them are willing to take part in vision screening and feel confident in their training, they should be included in such programs so that more people could be screened.

LITERATURE

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