THE ROLE OF GENERAL PRACTITIONERS IN TAKING CARE OF OPEN-ANGLE GLAUCOMA PATIENTS

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Key words: *Glaucoma, general practitioners, eye pressure, screening.*

Background: General practitioners could contribute to taking care of glaucoma, which is a socially important disease, by controlling the risk factors and timely referral to a specialist. The disease takes second place as a cause of blindness, despite the numerous investigations and new methods of diagnostics. There are 60 million people suffering from glaucoma and 7 million of them are blind. (1) The organization of the ophthalmic help considering this disease is of great importance.

Aims and tasks: To investigate the possible role of general practitioners considering glaucoma patients

Methods and materials: Written questionnaires were given to forty randomly selected general practitioners considering their role for glaucoma patients, SPSS statistic analysis

Results: Glaucoma affects up to 2% of those over the age of 40 years globally and up to 10% over the age of 80. (11) It is a multifactorial, chronic, progressive neuropathy, characterized by loss of ganglion cells, leading to atrophy of the optic disc nerve and the nerve fibre layer with characteristic changes in the visual field. (2), (15)

At the moment in Bulgaria general practitioners engagement considering glaucoma is prescribing the medicines, reimbursed by Healthcare insurance fund, even though they could refer patients to ophthalmologist by taking good history of the disease and even only by considering their age. This doesn't happen because of the lack of obligations, the restrictions of the referrals and insufficient emphasis on the matter.

There are many articles considering the possibilities and the level of screening for glaucoma in the general practice settings in different countries. For example an investigation took place in Brisbane, where a questionnaire was distributed to 130 randomly selected GPs. Only 15% of the participants were satisfied with their current knowledge and skills concerning primary open- angle glaucoma. 88% felt that patients over 50 years should be screened for the disease. (10) According to another investigation that took place in Australia glaucoma case- finding is feasible in general practice. (7)According to investigation that took place in the UK non-ophthalmically trained staff who have received tuition in the use of the equipment, can screen for glaucoma. (17)

Risk factors for glaucoma include increasing age, (21) black race, positive family history and diabetes. (13), (18) Since many high risk individuals are seen periodically by primary care physicians, general practice settings are a logical site for screening for open angle glaucoma. (12) A brief confidential questionnaire was distributed to primary care physicians in South Alberta. Of the respondents 53% claimed that they routinely screened for glaucoma; more urban than rural physicians did so (57% vs. 44%). The reasons most often given for not screening were lack of equipment and skills, cited by 48% and 30%, respectively. (8) According to an article by Dr Podolsky primary care physicians can make a major difference in reducing vision loss by identifying risk patients at an early stage of the disease (14).

In our investigations we gave by person written questionnaires to 40 randomly selected GPs. The first part of the survey included some passport data. The other part included 4 questions considering their role for glaucoma patients. 42% of general practitioners who answered to the questionnaire were residents, 22, 5% were specialists, 5% had specialty different from general medicine, but were working as general practitioners. 20 % weren't specializing at all.

They were asked in the questionnaire when they refer patients to be examined by an ophthalmologist in order to check the eye pressure. 42% (n=17) of the general practitioners answered that they refer patients when they have complaints, 40% (n=16) refer them when they complain and have relatives with glaucoma. 7,5% (n=3) answered that they refer patients to a specialist even only for a family relation to a glaucoma patient. 5% answered that they refer patients considering age and 5% when the patients insist for a referral. Fortunately, only one general practitioner never refers patients for measuring ocular pressure. However, it is still disturbing that such a great percentage of the physicians refer patients to a specialist when they have complaints, as it is clear that open- angle glaucoma has no symptoms until late stages of the disease.

General practitioners don't have any devices to help them measure the ocular pressure in general practice settings. They can have some orientation by palpation, which is performed by gently pressing the index finger against the cornea of a closed eye.

Figure 1 shows the distribution of answers to the question if general practitioners perform palpation and when if they do. 60% of them never perform the investigation.

Many different diagnostic methods (19) for identifying glaucoma have been investigated that can be used in early

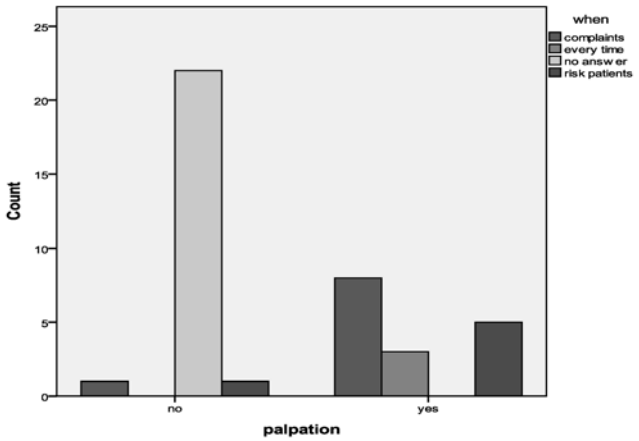

Fig. 1

detection of glaucoma in general practice settings- different kinds of tonometers, perimeters and the use of ophthalmoscope. For example according to article published in 1978 Schiotz tonometer is the best for general use. (3) Screening took place in Nottingam in 1990 using semi-automated intraocular pressure and visual field equipment operated by non-ophthalmologically trained staff. The sensitivity and specificity of the non-contact tonometer were 91,7% and 95,6%. (20) The purpose of a study from 1992 was to compare the effectiveness of noncontact tonometry using the Pulsair with that of conventional tonometry using Goldmann applanation tonometers. Non-contact tonometry correctly identified over 90% of the patients with intraocular pressure greater than 22 mm Hg. (16) According to Norwegian investigation the cut-off point in measuring ocular pressure by general practitioners should be kept low to avoid false reassurance of glaucoma patients that they don't have glaucoma, possibly as low as 17 mmHg. (5) The main aim of the study that took place in Norway was to estimate the specificity of oculokinetic perimetry for glaucoma case-finding in general practice.Test specificity was 94%. However, the proportion of false-positive tests seems to be too high to be used in mass screening. (6) There are articles on Tono-pen and Perkins tonometry use in the hands of GPs as well. (4) (9)

The general practitioners in our investigation were also asked if they would measure the eye pressure if they had the necessary equipment. Only 27, 5% of them would do it. Most of them (55%) point out as a reason not to do the investigation insufficient time, 15% don't think that they would manage with performing the investigation and 2,5% don't give any answer.

Using SPSS non-parametrical analysis we reject the null hypothesis in most of the questions that we have asked the general practitioners. (P<0,05). Only the question if they perform palpation doesn't reject the null hypothesis and the answers are not significant enough.

Conclusion: General practitioners in Bulgaria perform screening for open angle glaucoma by referring some patients of risk to an ophthalmologist but they still are not very clear with the early development of the disease as well as the risk factors. As most of them are not willing to measure eye pressure in general practice settings at least they should be provided with more information considering the risk factors of the disease. Creating brochures and discs with information for general practitioners in Bulgarian language is part of the future work of the team.

The reviewer: Professor, D.Med.Sc. Gruzieva T.S.

REFERENCES

1. Маждракова И., Учебник по очни болести за студенти по медицина, Болид, 2008

2. Чилова Б., М. Конарева, М. Атанасов, Глаукомите, изд. к. Стено, Варна, 2006

3. Abrahamson I., Intraocular pressure tonometry, Am Fam Physician, 1978, 17(6):75-80

4. Beneyto P., M. Barajas, F. Garcia-de-Blas et al, Predictive value of tonometry with the Tonopen XL in primary care,., Br J Gen Pract. 2007 Aug;57(541):653-4

5. Chiristoffersen T., T. Fors, K, Holtedahl, Glaucoma screening with oculokinetic perimetry in general practice:is its specificity accectable? Eye (Lond), 1995, (6):36-9

6. Christoffersen T., K. Holtendahl, T. Fors, U. Ringberg, Tonometry in the general practice setting(2): Which cut-off point for referral- for which patients?, Acta Ophthalmol(Copenh),1993, 71(1):109-13

7. Faigen M., The early detection of glaucoma in general practice, Aust Fam Physician, 2000, 29(3):282-5

8. Huang J., F. Rhemtulla, P. Huang Glaucoma screening by primary care physicians in southern Alberta: patterns, methods and deficiencies, Can J Ophthalmol, 2003, 38(4):279-84

9. Jackson C., J. Bullock, M. Pitt et al, Screening for glaucoma in a Brisbane general practice- the role of tonometry, Australian and New Zealand Journal of ophthalmology, 1995, 31(3):173-178

10. Jackson C., L. Hirst, Brisbane GPs' perceptions of screening for primary open – angle glaucoma, Aust N Z J Ophthalmol, 1995, 23(3):179-81

11. Kanski J., Clinical ophthalmology, seventh edition, Elselvier limited, 2011

12. Margolis K., Open-angle glaucoma, E. Rich, Prim Care, 1989, 16(1):197-209

13. Omoti A, Edema O, A review of the risk factors in primary open angle glaucoma, Niger J Clin Pract, 2007, 10(1):79-82

14. Podolsky M, Exposing glaucoma. Primary care physicians are instrumental in early detection, Postgrad Med, 1998,103(5):131-6

15. Ramdas WD, Wolfs RC, Hofman A et al, Author response: incident open-angle glaucoma and ocular perfusion pressure, Invest Ophthalmol Vis Sci, 2012, 17;53(1):150-1

16. Ralston M., N. Choplin, K. Hollenbach et al, Glaucoma screening in primary care: the role of noncontact tonometry, , Fam Pract, 1992, 34(1):73-7

17. Sheldrick J., A. Sharp, Glaucoma screening clinic in general practice: prevelance of occult disease, and resource implications, Br J Gen Pract, 1994, 44(389):561-565

18. Uhm KB, Shin DH, Glaucoma risk factors in primary open-angle glaucoma patients compared to ocular hypertensives and control subjects, Korean J Ophthalmol. 1992 Dec;6(2):91-9.

19. Ulrich W, Ulrich C, Petzel C, Eye-pressure tonometry in prevention of glaucoma, Ophthalmologe. 1993 Dec;90(6):557-62

20. Vernon S, D. Henry, L. Cater, S. Jones Screening for glaucoma in the community by non- ophthalmologically trained staff using semi automated equipment, , Eye (Lond). 1990;4 (Pt 1):89-97

21. Wilson MR, Hertzmark E, Walker AM, et al, A case-control study of risk factors in open angle glaucoma, Arch Ophthalmol. 1987 Aug;105(8):1066-71.

РОЛЬ ВРАЧЕЙ ОБЩЕЙ ПРАКТИКИ В ОКАЗАНИИ ПОМОЩИ ПАЦИЕНТАМ С ПЕРВИЧНОЙ ОТКРЫТОУГОЛЬНОЙ ГЛАУКОМОЙ

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Резюме: Врачи общей практики в Болгарии выполняют скрининг открытоугольной глаукомы. Поскольку для большинства из них является проблемой измерение глазного давления в общих условиях общей практики, то становится необходимым обеспечивать дополнительной информацией о факторах риска заболевания. Создание брошюры и дисков с информацией для врачей общей практики на болгарском языке является частью будущей работы в команде.

Ключевые слова: глаукома, врачи общей практики, скрининг, внутриглазное давление, глаукома.

РОЛЬ ЛІКАРІВ ЗАГАЛЬНОЇ ПРАКТИКИ У НАДАННІ ДОПОМОГИ ПАЦІЄНТАМ З ПЕРВИННОЮ ВІДКРИТОКУТОВОЮ ГЛАУКОМОЮ

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Резюме: Лікарі загальної практики в Болгарії виконують скринінг відкритокутової глаукоми. Оскільки для більшості з них є проблемою вимір очного тиску в загальних умовах загальної практики, то стає необхідним забезпечувати додатковою інформацією про фактори ризику захворювання. Створення брошури і дисків з інформацією для лікарів загальної практики на болгарській мові є частиною майбутньої роботи в команді.

Ключові слова: глаукома, лікарі загальної практики, скринінг, внутрішньоочний тиск, глаукома.