



Survey of Medical Officers Attitudes and Knowledge of Eye Conditions in Older Patients

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Authors' contributions

This work was carried out in collaboration between all authors. Authors KFM and AAA performed the study conception and design, study protocol, statistical analysis, interpretation of the results, draft of the manuscript and literature searches. Authors FOO and AAP performed the literature searches and critical review of the draft. Author AI performed the administration of questionnaire and data entry. All authors read and approved the final manuscript.

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ABSTRACT

Aim: To assess medical officers' attitude and knowledge of eye conditions in the elderly.

Study Design: Convenient sampling technique.

Place and Duration of Study: Department of Ophthalmology, Federal Medical Centre, Birnin Kebbi, Nigeria, November 2012.

Methodology: Thirty four medical officers were shown 10 slides of common external eye conditions in the elderly and were asked to give the diagnosis of each slide and complete a self-administered questionnaire during a hospital clinical presentation. The questionnaire and the

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answers to the 10 slides were collected immediately after the presentation.

Results: All the medical officers agreed that eye examination is an important part of the general medical examination. However, only 16 (47.1%) routinely examined the eye of the elderly patient as part of the general medical examination. Fourteen medical officers (41.2%) were comfortably examining the eye of the elderly. Though 6 (17.6%) medical officers reported being sufficiently trained in the ocular examination but only 1 (2.9%) admitted being proficient in the ocular examination. The entire medical officers agreed that ageing is a risk factor for some ocular conditions, but only 18 (52.9%) ever inquired from the older patients if they had any specific eye conditions. Many of the medical officers wrongly diagnosed the presented slides. There were associations between duration of the medical practice and attitude with the medical officers of less years of practice not bothering about the eye examination in the elderly during the general medical examination ($P < .05$).

Conclusion: Most studied medical officers were not routinely examining the eyes of the older patients and many were unable to diagnose common eye conditions in the elderly. Medical training should emphasize the ocular examination and diagnosis. The continuing eye medical education for medical officers can bridge the knowledge gaps in eye care and enhance early detection of the eye conditions.

Keywords: Common eye conditions; continuing eye medical education; elderly eye examination; medical officer.

1. INTRODUCTION

The lower limit for old age is defined. In high-income nations it is a chronological age of 65 while, in Africa 50 years is recommended. Nevertheless, the generally accepted lower limit is 60 year [1]. According to the World Health Organization, sustained good vision is an integral of 'active ageing' that is, continued health, security and participation in society as people age in order to ensure a good quality of life [2].

The proportion of the world population that is elderly has been on the increase and because of share population size the world old people would continue to be lopsided to low- and middle-income countries [3]. Many eye conditions among others cataract, macular degeneration, and glaucoma [4] are common in older people than any other population group and the prevalence of visual impairment increases with age. Although people of age 50 year and above constitute just one fifth of the world's population, more than four fifth of people living with blindness are in this age group [5]. However, old people are least likely to seek help when faced with eye problems or a deterioration of their vision [6]. This has implications for eye health and social care costs. Considerable resources are needed to help older people overcome the limitations imposed by poor vision [1].

The inspection of the eye by a doctor has been accepted as part of the physical examination for over a century. Many reasons may justify this.

First, the eye is a window to the body and many systemic illnesses may be picked or confirmed by the eye examination. For instance, diabetes mellitus [7] may induce refractive errors, cataract and retinopathy causing visual impairment; hypertension [8,9] may produce retinopathy and sickle cell disease [10] may be suspected by among others conjunctival icterus. Second, eye examination may detect treatable eye conditions including refractive errors, glaucoma and cataract when they are amenable to treatment [11]. Third, the eye examination can confirm the absence of vision threatening condition.

It is of interest that general medical examination including eye examination is rarely done in many clinics in medical practice. This may be sensible in order to gain time especially in a busy clinic with many waiting patients more so, when patients' complaints suggest no eye conditions however, this is not without its shortcomings. It is a missed opportunity as most patients rarely access eye care services until they are forced by disturbing eye complaints or referred by a standard health care practice. This may mean advanced eye conditions or their complications by which time the eye may not benefit from eye care intervention. No doubt the older patients would benefit more on routine eye examination than any other age groups as visually impairing conditions are more prevalent at old age [4].

In our eye care practice we conduct routine blood pressure check for older patients and many would suffer complications of hypertension were

picked and appropriately referred. Because of the prevalence of visual impairing conditions among older people, the eye examination as part of general physical examination by non eye care health personnel in clinics would worth the effort. This can be achieved through willing non eye care health personnel who of course are trained to pick out common eye conditions on examination. The purpose of this study was to assess the medical officers' (MO) attitude and knowledge of eye conditions in the elderly.

2. MATERIALS AND METHODS

This study was conducted in the month of November 2012 using structured questionnaire administered to the entire MO working at Federal Medical Centre (FMC) Birnin Kebbi, Nigeria excluding those working in the eye clinics as their schedule already exposed them to the eye conditions in elderly. The questionnaire was pre-tested among five MOs in another hospital and the necessary amendment made ahead of the survey. The FMC is the only tertiary hospital in Kebbi State which has a population of about 3.2 million [12]. Also, the hospital renders services to many patients from the neighboring states (Sokoto, Niger and Zamfara) and countries (Benin and Niger republics).

The Medical Officers (MO) as used in this paper referred to practicing qualified medical doctors without additional professional qualification in any medical specialty but attend to patients that consult them for any medical complaints.

The questionnaire sought MO' year of practice as a doctor, importance of eye examination in elderly, sufficiency of training in ocular examination, whether age is a risk factor for some ocular pathology, whether eye examination is an important part of general medical examination and whether the MO are

comfortable examining the eyes of elderly patients. The questionnaire was administered during the hospital clinical presentation and also 10 slides of common external ocular conditions in the elderly population were shown to the MO. The MO were requested to give a diagnosis for each slide. The questionnaire and the answers to the slides were collected immediately after the meeting thus preventing the participants from seeking external assistance. The entire participating MO graduated from medical schools in Nigeria.

The data was double-entered and analyzed using Statistical Package for the Social Sciences 15.0 (SPSS 2006, Chicago, Illinois, USA). Analysis was done using simple frequency proportions and Fisher's exact test for significance. $P < .05$ was considered as statistically significant.

3. RESULTS

The entire 34 MO who were present at the clinical presentation participated in the study (100% response rate). All have served as MO for at least one year ($P = .01$). There were significant associations between MO' duration of medical practice and their attitude to routine eye services in elderly with MO of less years of practice most likely not routinely inquiring from older patients if they had any specific eye conditions ($P < .001$), not routinely examining the eyes of the elderly patients as part of general examination ($P = .02$), and not comfortable examining the eyes of the elderly patients ($P = .01$) (Table 1).

Most MO (90%) had only two weeks of ophthalmology posting during their undergraduate medical training while the remaining 10% had three weeks posting. The entire MO agreed that the eye examination is an important part of the general medical

Table 1. The associations between medical officers' attitude and duration of medical practice

Medical officers' attitude to eye service in elderly	Response	Year of medical practice				Fisher's exact test	P value
		1-5	5-10	10-15	>15		
Routinely inquired from older patients if they had any specific eye condition	Yes	07	10	0	1	18.854	<.001
	No	14	0	2	0		
Routinely examine the eye of elderly patient as part of general examination	Yes	7	8	0	1	8.228	.02
	No	14	2	2	0		
Comfortable examining the eye of elderly patient	Yes	6	7	0	1	13.456	.01
	No	15	3	2	0		

examination however; only 16 (47.1%) of them routinely examine the eye of the elderly patient as part of the general medical examination. Fourteen MO (41.2%) reported being comfortable examining the eyes of the elderly patients but six (17.6%) admitted having sufficient training in the ocular examination of which only one (2.9%) confirmed being proficient in the ocular examination. The entire MO agreed that ageing is a risk factor for some ocular conditions however; only 18 (52.9%) inquired from older patients if they had any specific eye problem. Also the entire MO wanted to be trained on the ocular examination. On the slide projection of the common external eye conditions in the elderly population all the MO correctly identified cataract and 28 (82.4%) MO who missed the slide on Squamous cell carcinoma of the lid thought it's was benign tumor (Table 2).

Table 2. The medical officers' assessment of the projected slides on common eye conditions in the elderly

Ocular condition	Correct diagnosis (%)	Wrong diagnosis (%)
Cataract	34 (100)	00 (00)
Aponeurotic ptosis	24 (70.6)	10 (29.4)
Chalazion	21 (61.8)	13 (38.2)
Involitional ectropion	16 (47.1)	18 (52.9)
Poliosis	15 (44.1)	19 (55.9)
Pterygium	15 (44.1)	19 (55.9)
Post herpetic zoster	11 (32.4)	23 (67.6)
Dermatochalasis	8 (23.5)	26 (76.5)
Squamous cell carcinoma (lid)	6 (17.6)	28 (82.4)
Conjunctival papilloma	2 (5.9)	32 (94.1)

4. DISCUSSION

This study assessed the MO' attitude and knowledge of the eye examination in the elderly as part of general medical examination. The studied MO were practicing medical doctors who were not eye specialists or yet to commence training to become one. They form the bulk of practicing medical doctors and essentially in contact with many patients including the elderly at their various duty posts across the health facilities.

The eye examination in the elderly as a part of general medical examination would be a cost effective method of screening sight threatening conditions among the elderly. It does worth the effort as visual impairing eye conditions are prevalent in the old age [4]. Moreover, it is a gained opportunity since the elderly presents in the hospital for a different condition. The old people are least likely to seek help when faced with eye problems or a deterioration of their vision [6].

The entire studied MO agreed that the eye examination is part of general medical examination but only 47.1% of them routinely examine the eye of elderly patient as part of general medical examination. Also, the entire MO agreed that ageing is a risk factor for some ocular conditions however; only 52.9% inquired from older patients if they had any specific eye problem. The above discordances reflected the differences between the theory or ideal and practice or reality. It is most likely a true picture of what obtains as the MO knew what ought to be and their actual practice. The reality might be to waive eye examination as part of general medical examination so as to gain time especially in a busy clinic with many waiting patients more so when patients' complaints suggest no eye conditions. On the other hand many MO might not be proficient in eye examination and rather bother not about it. This was possible in this survey as just 41.2% admitted being comfortable examining the eye of the elderly as part of general medical examination. Furthermore, only 17.6% admitted having sufficient training in the ocular examination of which only 2.9% confirmed being proficient in ocular examination. Moreover, the entire MO wanted to be trained on the ocular examination.

In this study, most MO (82.4%) admitted having insufficient training in the ocular examination and this might be due to lack of proper exposure during their undergraduate medical training. The surveyed cohort had undergraduate posting in ophthalmology for at most three weeks. In a previous study among Nigerian medical interns, the duration of the undergraduate medical posting in ophthalmology was adjudged short for acquiring the proficiency in the diagnosis of eye conditions and a duration extension advocated [13]. The failure to inquire from the older patients if they had any specific eye problem was probably due to the insufficient time, insufficient training and lack of confidence.

In this study many MO wrongly diagnosed the projected slides on eye conditions among the elderly. Interestingly, these are eye conditions that do not necessarily require one to be an eye specialist or the use of sophisticated equipment suggesting deficient knowledge on the common ocular conditions in the elderly. Expectedly, the entire MO were able to diagnose cataract slide correctly and this might be due to the fact that cataract is the commonest cause of blindness across the globe and hence the MO frequent exposure to the condition. The fact that the entire surveyed MO would like to be trained in the ocular examination suggests awareness of limitation/deficiency and is quite commendable. This can be achieved through continuing medical education.

This study may not be generalised and should be interpreted with caution in view of its convenient sampling design and small sample size. Nevertheless; most likely, the study is representative as most of the respondents were working at other various health facilities across the State before their appointment at the health facility where they were surveyed for this study. Furthermore, the study limited itself to ocular conditions that can readily be picked on anterior segment examination. This essentially exclude the eye posterior segment conditions that are common in the elderly especially age related macular degeneration, optic disc features of glaucoma and diabetic retinopathy [14]. Finally, further complementary study with large sample size and including the slides on the eye anterior and posterior segments' conditions is suggested.

5. CONCLUSION

Most medical officers were not routinely examining the eyes of the older patients and many were unable to diagnose the common eye conditions in the elderly. The medical training should emphasize the ocular examination and diagnosis. The continuing eye medical education for the medical officers can bridge the knowledge gaps in the eye care and enhances early detection of the eye conditions.

CONSENT

Informed consent was obtained from the individual Medical Officer who participated in the study.

ETHICAL APPROVAL

The study was approved by the Federal Medical Centre ethics committee and have therefore; been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Evans J. Eye care for older people. *Community Eye Health J.* 2008;21(66):21-23. Available: www.who.int/ageing/active_ageing/en/index.html (accessed 29 February 2008).
3. AU policy framework and plan of action on ageing. Help Age International. Available at: www.helpage.org/resources/Policyreports/main_content/1118337558-011/AUFrameworkBook.pdf. Accessed 15 January, 2013.
4. Minassian DC. Visual impairment. In: Ebrahim S, Kalache A, eds. *Epidemiology in Old Age*. London: BMJ Publishing Group. 1996;337.
5. Global Initiative for the Elimination of Avoidable Blindness: Action plan 2006–2011. World Health Organization; 2007. Available: www.who.int/blindness/Vision2020_report.pdf Accessed 17 March 2014.
6. Nkumbe H. Helping older people get the eye care they need. *Community Eye Health J.* 2008;21(66):26-28. Available: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2467467/>. Accessed 17 March 2014.
7. Eye Problems and Diabetes. Available at: <http://www.webmd.com/eye-health/eye-problems?> Accessed 12 January 2013
8. Bastola P, Pun CB, Koirala S, Shrestha UK. Fasting serum lipids and fundus changes in hypertensive patients. *Nepal Journal of Medical sciences.*

- 2012;1(2):103-7. Available: [www.njmsmanipal.com/downloads/Original%20Article 09.pdf](http://www.njmsmanipal.com/downloads/Original%20Article%2009.pdf) Accessed 17 March 2014.
9. Karki KD. Incidence of Ophthalmoscopic fundus changes in hypertensive patients. Kathmandu Univ Med J. 2003;1:27-31.
10. Roy H, Charles S, Jayne RP, Talavera F. Ophthalmologic Manifestations of Sickle Cell Disease. Available: <http://emedicine.medscape.com/article/1918423-overview>. Accessed 15 January, 2013.
11. Evans JR, Fletcher AE, Wormald RPL. Causes of visual impairment in people aged 75 years and older in Britain: an add-on study to the MRC Trial of Assessment and Management of Older People in the Community. Br J Ophthalmol. 2004;88:365-370. DOI: 10.1136/bjo.2003.019927.
12. Federal Republic of Nigeria: 2006 population census. Available at: <http://www.nigerianstat.gov.ng/Connections/Pop2006.pdf>. Accessed on 20 December, 2012.
13. Adeboye A, Ayanniyi AA, Ademola-Popoola DS, Owoeye JFA. The choice of ophthalmology as a career among Nigerian medical interns. African Journal of Medicine and Medical Sciences. 2006;35:321-323. Available: www.ncbi.nlm.nih.gov/pubmed/17312739. Accessed 17 March 2014.
14. Congdon N, O'Colmain B, Klaver CC, Klein R, Munoz B, Friedman DS, et al. Causes and prevalence of visual impairment among adults in the United States. Arch Ophthalmol 2004;122:477-485. Available: www.v2020la.org/pub/publications_by.../visual_impairment.pdf. Accessed 17 March 2014.

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