

## Accuracy of Diagnosis and Referral of Ophthalmic Patients by General Practitioners

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**Introduction:** The general outpatient department of a hospital is the first point of contact for most patients. Health care services are offered for a wide variety of diseases, including eye diseases. Ocular diseases have been found to be common in general practice<sup>1,2</sup>. The ability of the general practitioner to accurately identify and manage ophthalmic patients is vital to patients' outcome.<sup>3</sup> This study aimed to determine the level of agreement between the general practitioners (GP) and the ophthalmologist in the diagnosis and referral of patients with ocular disorders at Enugu State University of Science and Technology (ESUTH) Teaching Hospital, Parklane, Enugu.

**Methods:** New patients presenting at the General Out-Patient Department (GOPD) of ESUT Teaching Hospital, Parklane, Enugu with different complaints, including eye complaints, were selected by systematic random sampling. Old or follow up patients were excluded. Selected patients were evaluated by the ophthalmologist after they had been independently assessed by the general practitioners. Diagnoses and referral decisions of the GPs were compared with those of the ophthalmologist using Kappa statistics<sup>4</sup>. Ocular disorder was defined as any eye disease; referral decision refers to whether or not a patient was referred to the ophthalmologist. Over-referral was defined as referral of a patient with an eye disease that could be managed by the GP while under-referral was defined as non-referral of a

patient with eye disease requiring referral to the ophthalmologist.

**Results:** A total of 382 patients were studied; and 22 GPs participated. Thirty-six (9.4%) patients were diagnosed to have ocular disorders by the GPs, while 112 (29.3%) patients were diagnosed with ocular disorders by the ophthalmologist. Only 36 (32.1%) of those with ocular disorders diagnosed by the ophthalmologist had also been diagnosed with ocular disorder by the GPs. No patient was diagnosed with ocular disorder by GP that was not diagnosed by the ophthalmologist. Correct diagnosis was made by GPs for 18 (16.1%) patients ( $k=0.102$ ,  $p<0.05$ ). The highest diagnostic agreement was obtained for conjunctivitis ( $k=0.464$ ,  $P<0.05$ ). None of the patients with posterior segment disorder was diagnosed by the GP. Majority (68 (81%);  $k = 0.616$ ,  $p<0.05$ ) of referrals were correctly made by GP. There were 28 (25.0%) under-referrals and 16 (19.0%) over-referrals.

**Conclusion:** Approximately one-third of patients seen by general practitioners had ocular disorders. But the GP detected disorders only in a third of those patients with ocular disorders; correct diagnosis of ocular disorders was made in only 16.1%, while no posterior segment disease was diagnosed. There was incorrect referral decision for up to a third of patients. This trend is worrisome as it suggests that some patients with ocular disorders who have presented to the hospital may go undetected or may not receive requisite care. Regular continuing medical education in ophthalmology, training in ophthalmoscopy as well as other skills and support for general practitioners are recommended to enhance diagnostic skills, referrals and overall management of patients.

## References

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