

**Severity of Glaucoma at Presentation in Bauchi, Nigeria**

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**Background:** This study aimed to determine the stage of primary open angle glaucoma at presentation at a tertiary eye unit, to assess patient's knowledge of glaucoma and acceptance and subsequent adherence to treatment. Glaucoma, a chronic disease of unknown aetiology, causes irreversible blindness. The prevalence of glaucoma blindness is higher in Africa than other regions. The disease is more aggressive and rapidly progressive. Control of glaucoma is inadequate in Africa: Glaucoma patients usually present very late, often blind in one eye, as they are poor and uneducated. Acceptance of surgical treatment is poor as there is no visual benefit; many cannot understand why surgery is being offered for the "wrong eye".<sup>1-3</sup>

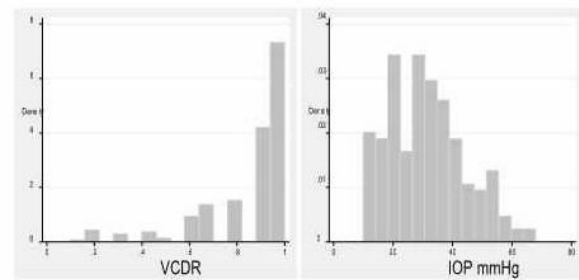
**Methods:** Information collected prospectively on new glaucoma patients aged 30 or more years included distance from residence and what they knew about glaucoma and its treatment. Treatment offered took account of disease severity and socioeconomic factors. Reasons for not accepting surgery were recorded. At follow up intraocular pressure (IOP) was measured and adherence to medication assessed verbally. Four categories of severity of disease were defined based on visual acuity and visual fields defects in the worse eye (Table 1).

**Table 1:** Categorisation of severity of disease

| End stage disease | No light perception or light perception only   |
|-------------------|--|
| Advanced disease  | <10° field or <3/60 VA from optic nerve damage |
| Moderate disease  | 10-20° field and VA >3/60                      |
| Mild disease      | Any other field loss                           |

**Results:** A total of 131 patients were recruited (mean age 52.8 years; 62 % male). Most attended because of symptoms (77 %). Mean IOP in affected eyes was 31.9+/-SD 12.4 and mean vertical cup:disc ratio was 0.8. (Figure 1).

Ninety-nine eyes (47 %) had a visual acuity of light perception or worse. Risk factors for advanced/end-stage disease were age >50 years, living >10 km from the hospital, some awareness of glaucoma, being illiterate, being unemployed and presenting with symptoms. In multivariable



**Fig. 1:** Distribution of VCDR and IOP in 131 patients

analysis older age and poor knowledge of glaucoma remained independent risk factors. Seventy-five were offered trabeculectomy; five agreed but only one underwent surgery. Reasons for rejecting surgery were fear (37 %), preferred medical treatment (27 %) and cost (15 %). Thirty-two of eighty-five patients (24 %) started on topical medication attended follow up. Approximately, 72 % reported excellent compliance but only 56 % of glaucomatous eyes had IOPs less than 21mmHg. Other results are presented in Table 2.

**Table 2:** Summary of results

| Parameter                      | Result                       |
|--------------------------------|------------------------------|
| Mean age                       | 52.5±1.36 years              |
| Presented with symptoms        | 76.7%                        |
| Severity: advanced or endstage | 65.8%                        |
| Family history of blindness    | 34.2%                        |
| Family history of glaucoma     | 17.5%                        |
| Awareness of having glaucoma   | 60.8% knew they had glaucoma |
| Knowledge about glaucoma       | 80% had poor knowledge       |
| Agreed to surgery              | 7.9% accepted                |
| Underwent surgery              | 1.7%                         |
| Adherence to drops (1 month)   | 19.2% had good adherence     |
| Attendance to follow up        | 24.4%                        |

**Conclusion:** To prevent glaucoma blindness, strategies are required to promote earlier detection, as well as counselling to promote acceptance of and adherence to treatment.<sup>4,6</sup>

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