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Therapeutic Itineraries of Patients with Primary Open-Angle Glaucoma at the IOTA

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Abstract

Glaucoma is a progressive optic neuropathy, often associated with hypertonia, and is the second leading cause of blindness worldwide [1]. The prevalence of glaucoma varies according to ethnic origin, being more frequent in subjects of African or Afro-Caribbean origin [2]. The aim of the study is to understand patients' care-seeking behavior and to analyze the underlying reasons. This is a descriptive cross-sectional study conducted over a six-month period, including patients aged 30 and over diagnosed with GPAO. The results show that the most common age group was 60 - 70 years, and that 54.91% of patients did not attend any other center apart from IOTA. Satisfaction with the care received was mixed, with 52.73% of patients satisfied. Decreased visual acuity was the most frequent reason for consultation, and IOTA's technical facilities were the most frequently cited reason for choosing this center Although limited by its strictly hospital-based nature, the study reveals patients' behavior and reflexes when faced with the first symptoms of their disease.

Keywords

Glaucoma, Itineraries, Treatment, GPAO, IOTA, Bamako

1. Introduction

Glaucoma is defined as a progressive anterior optic neuropathy, characterized by the death of retinal ganglion cells and their axons with a specific appearance of the visual field, most often associated with hypertonia [1]. It is the second most common cause of blindness worldwide and the most frequent cause of irreversible

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blindness. Glaucoma remains an insidious disease that is discovered late, with most epidemiological studies showing that around 50% of cases go undiagnosed [2].

The prevalence of glaucoma varies according to ethnic origin, being higher in people of African or Afro-Caribbean origin (4.2%), intermediate in Caucasians and Hispanics (2.1%), and lower in Asians (1.4%) [3]. It is the second most common cause of blindness in Congo-Brazzaville, with hospital prevalence estimated at 13% [4]. In Mali, a study was carried out on 634 cases of consultations, and GPAO represented 72 eyes of 36 patients, *i.e.* a frequency of 5.68% [5].

The aim of this study is therefore to understand patients' care-seeking behavior and to analyze the underlying logic.

2. Methodology

We conducted a descriptive cross-sectional study over a 6-month period from 1 January to 31 July 2024. The study concerned all patients who consulted the I.O.T. A with an age of 30 years and more; in whom the diagnosis of GPAO is retained. We included all consenting patients consulting the IOTA for GPAO who were aged 30 and over. The following were excluded from the study: accompanying persons, patients who came for a complementary check-up (CV, ultrasound, EOG, ERG, etc.) or for the purchase of corrective lenses, consultants with pathologies other than GPAO, refusal to submit to the questions of the investigators. The sampling method was non-probabilistic. All patients who met the inclusion criteria and consented were systematically submitted to the questionnaires. Data collection was carried out using a pre-established survey form. Informed consent was sought from patients and obtained after clear explanations of the objectives of the work. Confidentiality was respected.

3. Results

A total of 275 patients were selected and questioned, with the following results The distribution of patients according to age showed that the 60 - 70 age group was the most represented with 68 cases, *i.e.* a frequency of 24.72%, followed by the 30 - 40 age group with 56 cases, *i.e.* 20.36%, then the 40 - 50 age group with 48 cases, *i.e.* 17.45%.

The average age of patients was $45\pm$ 6 years, with extremes of 30 and 80 years (See **Table 1**).

A large number of patients (33.81%) attended at least one (1) center (See **Table 2**).

The IOTA was the first facility visited by 54.18% of patients and 5.82% of traditherapists.

In terms of satisfaction with care, 52.73% of patients were satisfied with the care they received, compared with 47.27% who said they were not satisfied.

By mode of admission, 82.55% of patients were admitted without any referral, while 17.45% were admitted following a medical referral.

Table 1. Distribution of patients according to the number of centers attended before IOTA.

| No. of centers | Frequency | Percentage |
|----------------|-----------|------------|
| None | 151 | 54.91 |
| One center | 93 | 33.81 |
| Two centers | 19 | 6.91 |
| Three centers | 4 | 1.45 |
| Four centers | 4 | 1.45 |
| Five centers | 2 | 0.73 |
| Six centers | 2 | 0.73 |
| Total | 275 | 100 |

Table 2. Breakdown of patients by facility or person attended before IOTA.

| Structures attended | Frequency | Percentage |
|---------------------|-----------|------------|
| None | 149 | 54.18 |
| Tradith | 16 | 5.82 |
| Cscom | 19 | 6.91 |
| Csref | 15 | 5.45 |
| Clinpriv | 17 | 6.18 |
| Hoprég | 11 | 4 |
| Milagro | 4 | 1.45 |
| INSP | 19 | 6.91 |
| University Hospital | 22 | 8 |
| Other | 3 | 1.09 |
| Total | 275 | 100 |

Decreased visual acuity was by far the most frequent reason for consultation (53.1%), followed by pain (15%), headaches (7.7%) and a few minor cases. It should be noted, however, that sometimes a single patient presented several reasons for consultation at the same time (See **Table 3**).

Table 3. Distribution of patients according to influence of choice.

| Reason for consulting IOTA | Frequency | Percentage |
|----------------------------|-----------|------------|
| Reference | 48 | 17.45 |
| Awareness of the center | 57 | 21 |
| Proximity | 10 | 3.7 |
| Accessibility | 9 | 3.3 |
| Relationship with staff | 59 | 21.45 |

Continued

| Technical platform | 76 | 27.9 |
|------------------------------------|-----|------|
| Lack of knowledge of other centers | 15 | 5.5 |
| Other | 1 | 0.4 |
| Total | 275 | 100 |

The technical platform was the most frequently mentioned reason (27.9%), followed by relationship (21.45%) and reputation (21%).

4. Comments and Discussion

- 1) Social and demographic characteristics
- a) Sex

In our study, 60.90% of participants were male, with a sex ratio of 1.57.

In Burkina Faso, Ouedraogo M *et al.* in their series also found a male predominance of 72% [6]; Houeto S O E *et al.* noted gender parity [7].

This could be linked to socio-cultural and economic factors in our environment, which mean that men are more likely to attend hospitals.

b) Age

The average age of our patients was 45, ranging from 30 to 80. The age group most affected was 60 - 70, *i.e.* 24.27%.

In Algeria, M. Ikhlef, A. Ailem *et al.* found an average age of 57.97 + 10.77 years with a median of 56 years [8].

- 2) Therapeutic treatment
- i) Number of centers attended before IOTA

54.91% of patients stated that they had not attended any other center apart from the IOTA in the last two (2) years.

This rate is similar to that of Ouedraogo M *et al.* in Burkina Faso, who found that 55.5% [6].

had first recourse to modern facilities; HOUETO S O Etienne 55.3% [7].

This choice would be motivated by the proximity of patients to modern facilities and awareness campaigns for the use of modern services, but also by the quality of care in these centers.

This can be explained by the way patients perceive their illness in Africa, but also by the very important role played by healers in Africa.

On the other hand, Yoro *et al.* in Abidjan observed in their series self-medication as the first response to illness, which suggests that patients thought they knew what they were suffering from, or at least thought they were suffering from a temporary, benign illness. This choice is part of the regular habits of many African patients and reflects a desire to minimize or trivialize the illness as soon as it appears [9].

We justify this by the dissatisfaction of glaucoma patients, which is a chronic pathology.

ii) Structures or people consulted

In our series, 54.18% of participants did not consult or visit any structure or person other than the IOTA. This can be explained by the proximity of the IOTA's technical facilities, but also by ignorance of the existence of other centers outside our survey center.

iii) Patient satisfaction

Our survey showed that 47.27% of patients were not satisfied with the previous care they had received. This rate is comparable to that of Ouedraogo M *et al.*, who noted that 49% of patients felt that their condition had not improved after the first visit to [6].

This can be explained by the fact that glaucoma, being a chronic disease, progresses quietly and patients are consulted at a very advanced stage. The doctor can no longer provide the immediate, satisfactory solution that the patient would like.

3) Method of admission

In our series, a rate of 82.55% of participants was noted who consulted by self-referral.

This may be explained by the fact that CAPM patients are generally dissatisfied with their care; the consequence is a perpetual search for better solutions to their illness. They are therefore unable to wait for any conventional referral system.

4) The main reasons for consultation

53.10% of patients consulted for reduced visual acuity, often associated with blindness. Atipo-T *et al.* in Congo Brazzaville found that reduced visual acuity was the main reason for consultation with 74.1% [10].

Although GPAO is generally an asymptomatic disease, we note that AVB deserves particular attention as more than half of our patients presented with an AVB complaint.

5) Factors influencing patient access to IOTA

Our study reveals that 27.9% of patients came to IOTA because of its technical facilities, 21.4% because of their relationship with the hospital and 21% because of their reputation. In other words, the technical platform is the motivating factor for CAPM patients at IOTA.

5. Conclusion

The sample for this study comprised 275 patients. Although limited by its strictly hospital-based nature, it can lead to the conclusion that the survey revealed a number of reflexes and behaviors of our patients when faced with the first symptom of their disease. The majority of our patients have opted for modern facilities; it is true that they have not had their wishes fulfilled.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Thylefors, B. and Négrel, A.D. (1994) Le glaucome dans le monde. Bulletin de l'OMS,

- **72**, 539-542.
- [2] de Voogd, S., Ikram, M.K., Wolfs, R.C.W., Jansonius, N.M., Hofman, A. and de Jong, P.T.V.M. (2005) Incidence of Open-Angle Glaucoma in a General Elderly Population: The Rotterdam Study. *Ophthalmology*, 112, 1487-1493. https://doi.org/10.1016/j.ophtha.2005.04.018
- [3] Rudnicka, A.R., Mt-Isa, S., Owen, C.G., Cook, D.G. and Ashby, D. (2006) Variations in Primary Open-Angle Glaucoma Prevalence by Age, Gender, and Race: A Bayesian Meta-Analysis. *Investigative Opthalmology & Visual Science*, 47, 4254-4261. https://doi.org/10.1167/jovs.06-0299
- [4] Atipo-Tsiba, P.W., Messe Ambia Koulimaya, R. and Mongo, V.A. (2012) Blindness in Congo: Causes and Associated Diseases. *Annals of African Medicine*, **5**, 1025-1029.
- [5] Moro, S., Abdoulaye, N., Seydou, F., *et al.* (2019) Aspects Epidémiologique et Clinique du Glaucome Primitif a Angle Ouvert en Zone Rurale. *Revue Soao*, No. 1, 28-33.
- [6] Ouedraogo, M., Kouanda, S., *et al.* (2006) Itinéraire thérapeutique des tuberculux bacillifères dépistés dans deux centres de traitement de tuberculose au Burkina Faso, 2-3.
- [7] Houeto, S. and Etinne, O. (2005) Itinéraire thérapeutique des epileptiques dans l'arrondis-sement de Djidja, département de Zou; Benin. *Open Journal Ophtalmogy*, 41, 55-61.
- [8] Ikhlef, M. and Ailem, A. (2023) Epidemiological and Clinical Aspects of Primary Open-Angle Glaucoma in Bejaia: Bejaia Eye Study. *Journal Français d'Ophtalmologie*, 46, 1182-1194. https://doi.org/10.1016/j.jfo.2023.05.027
- [9] Marcel, Y.B. (2019) Itinéraire thérapeutique d'un malade décédé du SIDA à Abidjan (Côte d'Ivoire). 83-84.
- [10] Atipo-Tsiba, P.W. (2015) Le Profil du patient glaucomateux au CHU de Brazzaville. *Rwanda Médical Journal*, **72**, 8-10.