



Original article

Epidemiological and clinical profile of ENT diseases in district hospitals of Borgou in Benin

Profil épidémiologique et clinique des affections ORL dans les hôpitaux de zone du Borgou au Bénin

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Résumé

Objectif : Décrire le profil épidémiologique et clinique des affections ORL dans les hôpitaux de zone du Borgou en 2023.

Méthodologie : Il s'est agi d'une étude transversale à visée descriptive et analytique avec collecte prospective des données. Elle était menée de Mars à Juin 2023 dans les hôpitaux de zone du Borgou.

Résultats : Sur les 163 patients consultés, 161 présentant une affection ORL ont été colligés. L'âge moyen était de 34,45 ±21,60ans avec les extrêmes de 1mois et 80ans. La tranche d'âge de 0 à 10ans était prédominante, soit 23,60%. Le sex-ratio était de 1,15. Dans 27% des cas, le délai écoulé entre l'apparition des symptômes ORL et la consultation foraine des patients était supérieur à 5 ans. Les patients qui avaient une connaissance de la spécialité ORL représentaient 13,04%. Les affections diagnostiquées étaient otologiques (52,79%), rhinologiques (18,01%), cervicales (11,18%) et pharyngées (9,94%). Les affections otologiques étaient dominées par la surdité à tympan normal (17,39%) et les otites moyennes chroniques (13,66%). Parmi les affections rhinosinusiennes, la rhinite allergique était majoritairement

représentée dans 11% des cas. Concernant les affections pharyngées, la rhinopharyngite était la plus représentée dans 8% de cas. Le goitre était le diagnostic prédominant pour les affections cervicales dans 6% des cas.

Conclusion : Dans les hôpitaux de zone du Borgou, plusieurs affections en ORL ont été diagnostiquées. Elles sont dominées par les affections otologiques et rhinologiques.

Mots-clés : profil épidémiologique, clinique, affections ORL, Borgou.

Abstract

Objective: To describe the epidemiological and clinical profile of ENT conditions in Borgou area hospitals in 2023.

Methodology: This was a descriptive and analytical, cross-sectional study with prospective data collection. It was conducted from March to June 2023 in hospitals in the Borgou area.

Results: Of the 163 patients consulted, 161 with an ENT condition were collected. The mean age was 34.45 ±21.60 years with the extremes of 1 month and 80 years. The 0-10 age group was predominant,

at 23.60%. The sex ratio was 1.15. In 27% of cases, the time between the onset of ENT symptoms and the mobile consultation of patients was more than 5 years. Patients who had knowledge of the ENT specialty accounted for 13.04%. The conditions diagnosed were otologic (52.79%), rhinological (18.01%), cervical (11.18%) and pharyngeal (9.94%). Otologic disorders were dominated by normal eardrum deafness (17.39%) and chronic otitis media (13.66%). Among rhinosinus diseases, allergic rhinitis was the majority of cases in 11% of cases. Regarding pharyngeal diseases, nasopharyngitis was the most represented in 8% of cases. Goiter was the predominant diagnosis for cervical conditions in 6% of cases.

Conclusion: In the hospitals of the Borgou area, several ENT conditions have been diagnosed. They are dominated by otological and rhinological disorders.

Keywords: epidemiological profile, clinical, ENT diseases, Borgou.

Introduction

Otorhinolaryngology and Head and Neck Surgery (ENT-CCF) is a medical-surgical specialty treating conditions of the ears, nose, throat, neck and face. The clinical and evolutionary characteristics of these diseases vary from one region to another depending on epidemiological, climatic and even cultural factors. The frequency of ENT diseases varies from country to country. In fact, in Mali, ENT conditions accounted for 8.36% of all consultations according to Sacko and Iy. [1]. In 2014, the ENT team at the Moroccan field hospital in Guinea Conakry found an incidence of 8.14% for ENT conditions [2]. The onset of ENT diseases can be favoured by sociodemographic, economic, clinical and behavioural factors. Knowledge of the regional or even national particularities of ENT diseases would help to guide specific research work and for the implementation of management strategies for certain identified conditions. In sub-Saharan Africa and particularly in Benin, there are few data on ENT conditions. It

is with this in mind that our study focuses on the epidemiological and clinical profile of ENT diseases in hospitals in the Borgou area. The objective of this study is to describe the epidemiological and clinical profile of ENT conditions in hospitals in the Borgou area in 2023.

Methodology

The study took place in the hospitals of the Borgou area, namely the Saint Martin Hospital of Papané, Saint Jean de Dieu Hospital of Boko, Sounon Sero Hospital of Nikki and the Evangelical Hospital of Bembèrèkè during the mobile consultations organized by the ENT department of the CHUD-B/A with the support of the Departmental Directorate of Health of Borgou. This was a cross-sectional, descriptive and analytical study with prospective data collection. It concerned patients with an ENT condition and residing in the department of Borgou during the period March to June 2023.

Included in the study were subjects of any age and sex, who had given their free and informed consent, residing in the survey areas mentioned above and presenting with an ENT condition at the time of the mobile consultation.

Subjects who were absent from the site on the day of collection and who did not have any ENT conditions at the time of the consultation were not included in our study. Comprehensive enrollment was carried out including all patients meeting the inclusion criteria .

The dependent variable was the presence of ENT disease. The variables studied were: socio-demographic characteristics and clinical data of patients. The analysed data were collected using a survey sheet. They were processed with Epi info 7.2.5.0. A multivariate analysis was performed using binary logistic regression to adjust for factors associated with delay in the management of these ENT conditions. A p-value threshold of less than 5% was considered statistically significant.

Results

A total of 161 subjects were selected for this study. The mean age of patients was 34.45 ± 21.60 years with the extremes of 1 month and 80 years. About a quarter of the patients were between 0 and 10 years old. The sex ratio was 1.15 with 53% males and 47% females. Out-of-school patients accounted for 42% of the series. Pupils and students were mostly represented in 22% of cases. The ENT specialty was known by only 13% of patients. In the majority of cases, patients had no medical, surgical or family history, 14% of patients consumed alcohol and 11% used tobacco. Patients living in the commune of Bembèrèkè and Parakou predominated in the present study in 30% and 24% respectively.

Table I shows the distribution of patients with ENT disease according to distance from the management centre. More than half of the patients (54.66%) travelled more than 10 km to reach the treatment centres.

Regarding the reasons for consultation, hearing loss and otalgia were the predominant complaints among patients with an otological condition in 45% and 38% respectively. For rhinosinus disorders, nasal obstruction and rhinorrhea were the predominant reasons for consultations in 72% and 38 of cases, respectively. Cervical swelling was the predominant reason for consultation among patients with neck disease in 40% of cases. For those with pharyngeal and laryngeal disorders, the predominant reasons are odynophagia in 22% and dysphonia in 7%, respectively. In 27% of cases, the time between the onset of ENT symptoms and the mobile consultation

of patients was mostly more than 5 years.

The time between the onset of ENT symptoms and the mobile consultation of patients was mostly more than 5 years (26.71%). The breakdown of this period is detailed in Table II below.

About 23% of the patients had subsequently consulted and 39% were receiving treatment with a doctor's prescription. In the present study, ENT diseases predominated in the ear (52.17%), followed by rhinosinus diseases (18.01%). Table III shows the distribution of patients with ENT disease according to the topography of the condition.

Normal eardrum hearing loss was the predominant diagnosis among otologic conditions (17%). Among rhinosinus diseases, allergic rhinitis was the majority of cases in 11% of cases. Regarding pharyngeal diseases, nasopharyngitis is by far the most represented in 8% of cases. Goiter was the predominant diagnosis for cervical disorders (6%).

According to the topography, ENT diseases predominated in the ear in 53% and are infectious in 55% of cases. In the present study, 86% of patients were late in their care, with a delay in consultation for more than 1 month, and 13% had complications associated with the ENT condition.

After multivariate analysis, it was noted that the distance between the place of residence and the care center was significantly associated with the delay in care with a p-value of 0.04. Similarly, prior treatment was associated with delayed management of ENT conditions with a p-value of 0.02 and patients who had undergone treatment on medical prescription would run 4 times the risk of a delay in specialized management.

Table I: Distribution of patients with ENT disease according to distance from the care center (Borgou, 2023; N=161)

Distance from the residence to the centre of the JEP	Staff	%
0-10Km	73	45,34
10-20Km	42	26,09
20-30Km	14	8,70
30-40Km	3	1,86
40-50Km	12	7,45
>50Km	17	10,56

PEC: Supported

Table II: Distribution of patients with ENT disease according to the duration of symptoms (Borgou, 2023; N=161)

Duration of symptoms	Staff	%
[0 - 1 month]	23	14,29
]1 month - 6 months]	14	8,70
]6 months - 1 year]	36	22,36
]1 year - 2 years]	20	12,42
]2 years - 5 years]	25	15,53
> 5 years	43	26,71

Table III: Distribution of patients with ENT disease according to the topography of the condition (Borgou, 2023; N=161)

Topography of the lesion	Staff	%
Ear	84	52,79
Nose-sinus	29	18,01
Neck	18	11,18
Pharynx	16	9,94
Larynx	4	2,48

Discussion

In this series, the mean age was 34 years and the 0 to 10 year age group was predominant with a proportion of 24%. This result is similar to that found by several authors. Zounon et al., after a study in Dan in southern Benin, also reported that children aged 0 to 9 years accounted for 31% [3]. Tall in Senegal had also found a frequency of 20% in children aged 0 to 10 years [4]. This high frequency of children could be explained by the immaturity of the immune system, poor environmental hygiene conditions and overcrowding, especially in school environments. In this study, the sex ratio was 1.15 with a male predominance. On the other hand, Attifi et al. in Guinea, Conakry had regained a female predominance in their series [2]. The ENT specialty was known by only 13% of patients. Flatin et al. found a proportion of 6.5% of subjects in Zou/Collines (Benin) with knowledge of ENT. [4]. Diallo et al. observed that 33% of patients were aware of attitudes or practices harmful to ENT health [6]. This low level of knowledge of the ENT

specialty in this study could be explained by the lack of an ENT service in the vicinity of the population. Indeed, the majority of patients were more than 10 km away from the treatment center. It also reflects the difficulty of access to health care due to the lack of availability of specialized consultations. The most frequent reasons for consultation were nasal obstruction (71.88%), hearing loss (45.24%), cervical swelling (40.00%), odynophagia (22.24%) and dysphonia (6.67%). These results vary from one study to another. In the study of Zounon and ly. in Benin, the patterns were dominated by facial pain, cervicofacial swelling, and rhinorrhea [3]. In the analysis conducted by Diallo and ly. [7] in Guinea Conakry, the main reasons for patients seeking medical attention were otalgia and fever. More than a quarter of patients have waited more than 5 years (26.71%) before consulting for otorhinolaryngology (ENT) symptoms since their onset. This delay is significantly higher than that found by Flatin and ly. (in South Benin) who had reported in its series a duration of more than 1 year

between the onset of symptoms and the day of the mobile consultation [5]. This long delay in this study could be explained by the low level of education of the patients. Patients in these classes are likely to delay seeking medical attention due to a lack of knowledge about the disease. The lack of financial means as well as the non-availability of an ENT service close to the population could also be at the origin of this delay in the use of care.

This study found that the most common conditions were normal eardrum hearing loss (17.39%), chronic otitis media (13.66%), allergic rhinitis (11.18%) and nasopharyngitis (8.07%). The distribution of ENT conditions varies from study to study. That of Zounon and ly. (in southern Benin) noted a predominance of multinodular goiter (18.86%), pharyngitis (17.58%), otitis externa (15.48%) and otitis media (12.09%) [3]. The study of Diallo and ly. (in Guinea Conakry) found a predominance of rhinosinusitis (30.85%) and otitis (20.14%) [6]. Merino-Galvez (Spain) reported that the most common diagnoses were upper respiratory tract infection (21.3%), pharyngitis (15.8%) and vertigo (13.7%) [8]. We can therefore conclude that commonly diagnosed ENT conditions vary from one region to another and also depend on the way patients are recruited.

Infectious or inflammatory conditions (55.28%) are the majority represented in this study. Zounon and ly. Attifi and ly. all reported a similar result with proportions of 68.04% and 54.51% respectively [2, 3]. This predominance of infectious or inflammatory diseases could result from hygienic conditions, the tropical climate that favors the spread of germs, and self-medication that can encourage the emergence of infectious diseases by reducing the effectiveness of antibiotics. The high prevalence of children in this study may also explain why infectious diseases are so common. This is because children often have predisposing factors to infectious conditions such as nasopharyngitis and ear infections. Predisposing factors are: immaturity of the immune system, short-term breastfeeding, passive smoking, gastroesophageal reflux disease, allergy, adenoid hypertrophy [9,10].

Approximately 86% of patients were late in their care with a delay in consultation for more than 1 month in this study. Thirteen percent (13%) of patients were already at the complication stage. The same observation was made by Hounkpatin in Parakou in 2015 who reported that 73% of the patients in his series had a consultation time of more than 15 days [12]. This long consultation period in this study could be justified by the absence of an ENT service in the vicinity and also by the low level of education and monthly income. This delay could also be explained by self-medication, the primary use of traditional therapists, and initial care by community health centres that do not refer patients to a specialized centre in time. According to Sérémé and ly. The complications are mainly due to late consultations of our patients at very advanced stages of infection and also due to the inappropriate initial treatment, prescribed at the lower rungs of the care pyramid [12]. Zounon et al. in its study on ENT self-medication in southern Benin reported that self-medication is one of the main causes of delayed diagnosis [13]. These data are also confirmed by the multivariate analysis of this study, which revealed that previous treatment ($p = 0.0167$) and distance between place of residence and management centre ($p = 0.0448$) were significantly associated with delayed management of ENT conditions.

Conclusion

This epidemiological and clinical profile reflects the needs for ENT care of populations in disadvantaged areas of northern Benin. The conditions encountered were mainly inflammatory and chronic. Otologic diseases were the most frequent, followed by nasal sinus disorders. These conditions require our populations to be informed and made aware of the need to contact specialized medical centers without waiting for complications.

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