

# Place of Otorhinolaryngological (ENT) Diseases in a 2<sup>nd</sup> Level Health Center: Case of the of Commune V (CSRéf CV) Reference Health Center of the District of Bamako

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## Abstract

**Objective:** Provide the place of ENT diseases at the Reference Health Center of the Commune V of Bamako. **Materials and Method:** A cross-sectional study using ENT medical assessment was carried out from January 2017 to December 2017 at the Reference Health Center of Commune V of Bamako's District. **Results:** 1911 patients were included and that number represented 15.46% of all non-obstetrics medical consultations in the health center. The sex ratio was 0.83 for women (54.7%). The average age was 22 years old. Otolgic diseases were 66.4% of the cases followed by nasal sinus cases (16.6%). Infectious and inflammatory diseases were 74.1% and were the main diagnosed diseases. The difficulties were mainly from technical platform. **Conclusion:** The diversity of these pathologies required a strong development or reinforcement of human and material resources capacities in of these structures for proximity care management.

## Keywords

ENT Disease, Care, Reference Health Center

## 1. Introduction

Otorhinolaryngological (ENT) diseases are one of the main reasons of general

and pediatrics medical consultation [1]; they are varied and may involve infectious, inflammatory, traumatic, congenital malformation, tumoral or degenerative diseases [2]. They could represent emergency cases that can rapidly be life-threatening, as in the case of foreign bodies [3] [4], epistaxis [5] and cellulitis [6] or functional prognosis [7]. Others are handicaps affecting relationship and communication life such as deafness are important examples [2] [8]. To date, only very few studies exist in the literature on those types of ENT diseases seen in Mali in general and in Bamako in particular. The presence of an ENT Specialist Physician is recent in the Reference Health Centers of Bamako, health pyramid 2<sup>nd</sup> level in Mali. Previously, his substitutions were provided by Medical Assistants, General or Pediatricians Practitioners, who sometimes refer patients to others. The creation of specialized units would certainly improve the management of this current situation and conditions. Our study present preliminary data on the cartography of the different types of affection encountered as a report form of otorhinolaryngological medical consultation carried out in our reference health center.

## 2. Objectives

- Determine the frequency of ENT diseases;
- Provide patient sociodemographic characteristics;
- Establish main health conditions distribution by topographical and typological;
- List rare diseases.

## 3. Materials and Method

This was a cross-sectional study conducted over a 12-month period from January to December 2017 in the ENT unit of the Reference Health Center of Commune V of Bamako District, which is one of six Reference health centers of Bamako coming in 2<sup>nd</sup> reference in the health pyramid before the hospitals. The inclusion criteria were any new patient received in ENT consultation. Previously included patients visiting us during the study period for a second or more time and those admitted to other units for ENT disease were not included. The variables taken in account in this study were age, sex, patient residence origin, occupation, reason of medical visit and diagnosis. These informations were collected through clinical examination if necessary, through paraclinical examinations in the health center record book. The difficulties of this work were from the lack of adequate equipment and infrastructures at ENT. These important difficulties included specifically lack of operating theater and appropriated equipment for complementary examinations such as (functional explorations, imaging, endoscopy), forcing us to refer some of our patients to other better-equipped structures in order to establish a correct diagnosis. However referring our patients to other better-equipped structures has increased the number of incomplete files by those lost to follow-up during the study; and that was also the main limitation of this study. As a consequence, the accurate frequencies of the patient were difficult to estimate. The analysis was done with SPSS 22.0 software.

## 4. Results

One thousand nine hundred and eleven patients were included in this study respectively 54.7% and 45.3% women and men. The sex ratio was 0.83 for women.

ENT diseases accounted were 15.46% of all medical consultations in this center. This total medical consultation was 12,360 patients excluding obstetrical cases.

### 4.1. Socio-Demographic Aspects

The age range group 11 to 20 years (see **Table 1**) was the most represented (32.7%). The average age was 22 years with extremes of 10 days and 93 years. Students were for 29.5%, preschool children 26.5% and the rest (44%) were adult active worker. Residents of commune V were 66.9% of patients; the others come from the rest of Bamako and the Koulikoro region representing 33.6%.

### 4.2. Clinical Study

#### 4.2.1. Distribution of Patients by Topographic Health Condition (Table 2)

- Otolological diseases accounted for 66.4% of cases. In this topography the acute purulent otitis media constituted the main affection with 35.1% (446 cases).
- Nasal sinus diseases were 16.6% and specifically were mainly rhinitis and rhinopharyngitis respectively 46.3% (148 cases) and 21.3% (68 cases).
- In the group of pharyngeal-laryngeal-esophageal affections, the frequency of angina and pharyngitis was respectively 46.7% (113 cases) and 41.4% (100 cases).

Other Head and Neck locations: Thyroid (17 cases), Salivary glands (6 cases), Lymph node (8 cases), Nerves (24 cases), facial bones (3 cases), cellulo-aponeurotic tissue (3 cases).

#### 4.2.2. Distribution of Patients by Typological Health Condition (Table 3)

- Inflammatory and infectious diseases accounted for 74.1% (1416 cases), including two cases of Eagle's syndrome, two cases of nasal-sinus tuberculosis and one case of over-infected Pre-tragic fistula, the examination of which revealed the presence of Koch's Bacillus in pus.
- Foreign bodies accounted for 4% (77 cases).

## 5. Discussion

ENT diseases accounted for 15.46% of all consultations in this center. This is above of previously reported ENT diseases respectively 12% and 2.14% by Kéïta M [9] in Ségou's Hospital (Mali) and Njiffou N [10] in Laquinitie Hospital in Douala (Cameroon). The differences across the studies were associated with health center activity, the health center pyramid level, the number of ENT specialists, the socio-economic and cultural level of the populations of the study area.

**Table 1.** Patients distribution by age range.

Age range (year)	Effective	Frequency
[0 - 10]	402	21.0
[11 - 20]	624	32.7
[21 - 30]	368	19.3
[31 - 40]	222	11.6
[41 - 50]	119	06.2
[51 - 60]	79	04.1
[61 and over]	97	05.1
Total	1911	100

**Table 2.** Distribution of patients according to the topography of the affections.

Topography of affections	Effective	Frequency
Otologic	1270	66.4
Nasal sinus	320	16.6
Oral	18	1.1
Pharyngeal-laryngeal	236	12.4
Esophageal	06	0.3
Other Head and Neck locations	61	3.2
Total	1911	100

**Table 3.** Distribution of patients by type of health condition.

Typological health condition	Effective	Percentage (%)
Inflammatory and infectious	1416	<b>74.1</b>
Earwax and epidermal plug	264	13.8
Foreign bodies	77	04
Sensorineural	75	3.9
Tumoral	27	1.4
Traumatic	26	1.4
Hemorrhagic	19	01
Malformative	07	0.4
Total	1911	100

The female accounted for 54.7%; this finding was same at the Laquinitinie Hospital of Douala and at the Departmental Hospital of Borgou (Benin) where the female was 57.28% and 50.29% respectively [11].

The majority of patients were students living in Commune V, representing 29.5% followed by preschool children 26.5%. This observation could be explained by the proximity of the study site health center to several schools and the university campus. We note that one-third of our patients came from Kati,

Koulikoro and other communes of Bamako despite the presence of ENT unit in these localities. This could be explained by the good expertise history of CSRéf CV, as part of top Reference Health Center of Mali, its geographical position that has easy access to populations.

Topographically our results do not agree with those from Attifi H [12] and Njiffou N [11] that found that nasal sinus infections were the most common. But on the type of affection our results are much closer. These many infectious and inflammatory disease cases could be explained by anatomical, environmental factors, promiscuity, poor lifestyle, and self-medication [13].

The young age of our patients is a reflection of the predominantly younger population in Mali [14], which is, similar to N'Djolo A in Yaoundé (Cameroon) [15], explaining the frequency of acute otitis media [16] [17].

We have two cases of histologically confirmed nasal sinus tuberculosis and one case of over-infected pre-tragic fistula whose examination has revealed the presence of Koch's bacillus. Tuberculosis is a worldwide public health problem, particularly in developing countries [18]. Extra lymph node ENT tuberculosis is a rare frequent localization of extra-pulmonary lesions [19]. But in a country like ours, it must remain a diagnosis to be evoked in any case of tumoral or pseudo-tumoral pathologies and in case of any chronic infection that been not successfully treated. The diagnosis is most often histological and/or bacteriological [20].

Foreign bodies are frequent in ENT consultation especially in children where they often induce emergencies by their appearance, their shape, their location, their nature (button-battery) or their oldness. They can quickly be life-threatening problem [3] [21] and 77 cases (4%) were identified in our study, including 56 children (72.72% of all foreign bodies). African authors have reported that foreign bodies accounted for 50.79% of pediatric ENT emergencies [22] and 33.07% of ENT emergencies [23] while a French study found that foreign bodies accounted for 8.08% of ENT in Strasbourg University Hospital [24]. Singaré K found that foreign bodies of the esophagus are much more common in children 63% as compared to adults [25].

We found two cases of Eagle's syndromes. Its rarity should not overshadow its existence and must be sought in any pharyngeal, oro-facial or oro-craniofacial symptoms. N'Jock in Douala found a prevalence of three cases per year in ENT consultation [26].

## 6. Conclusion

This study shows a significant place of ENT diseases in communal practice with a great diversity and therefore a multiplicity of care is provided in a context of under-medicalization. This will help to objectively guide the choice of health policies for a high accessibility of local health care. By equipping this health center with necessary infrastructures, materials and human resources, the entire sanitary pyramid will be highly improved.

## Conflicts of Interest

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

## References

- [1] Legent, F., Fleury, P., Narcy, P. and Bauvillain, C. (1999) *ORL Pathologie Cervico-Faciale*. 5<sup>e</sup> édition, Masson, Paris, 385 p.
- [2] Garrabedian, E.N., Bobin, S., Monteil, J.P. and Triglia, J.M. (2006) *ORL de l'enfant*. Médecine Sciences Flammarion, Paris, 447 p.
- [3] Kacouchia, N., N'gattia, K.V., Kouassi, M., Yoda, M., Buraima, F., Tanon Anoh, M.J. and Kouassi, B. (2006) Corps étrangers des VADS chez l'enfant. *Rev. Col. Odonto-Stomato. Afr. Chir. Maxillo-Fac.*, **13**, 35-39.
- [4] Khaoula, H., Btissam, B., Youssef, R., Hassan, N., Lahcen, A. and Abdelaziz, R. (2015) Les corps étrangers en ORL: Expérience de dix ans. *Pan African Medical Journal*, **21**, 1-6.
- [5] Dubreuil, C. and Céruse, P. (2004) *Guide pratique d'ORL*. Masson, 200 p.
- [6] Kéïta, M., Doumbia, K., Diango, D., Diallo, M., Timbo, S.K. and Ag Mohamed, A. (2008) La cellulite cervicale extensive en milieu hospitalier sub-sahélien une pathologie oubliée? *Médecine d'Afrique Noire*, **55**, 464-470.
- [7] Devèze, A., Ambrun, A., Gratacap, M., Céruse, P., Dubreuil, C. and Tringali, S. (2013) Paralysies faciales périphériques. *EMC Oto-Rhino-Laryngologie*, **8**, 1-22.
- [8] Mondain, M., Blanchet, C., Venail, F. and Vieu, A. (2005) Classification et Traitement des surdités de l'enfant. *EMC Oto-Rhino-Laryngologie*, **2**, 301-319.
- [9] Kéïta, M., Dao, K. and Ag Mohamed, A. (2005) Pratique oto-rhino-laryngologique en Afrique sub-saharienne: Cas du Mali à propos d'une expérience de 28 mois dans une province. *Médecine d'Afrique Noire*, **52**, 228-232.
- [10] Njiffou Njima, A., Ndjock, R., Essama, L., Moby, H., Fonyam, V., Bitang, L.J., Zambo Oyono, J.C., Ndjolo, A. and Ebana Mvogo, C. (2013) Profil de la pathologie ORL à l'Hôpital Laquinitinie de Douala. *Médecine d'Afrique Noire*, **60**, 415-418.
- [11] Hounpatin, S.H.R., Avakoudjo, F., Lawson-Afouda, S., Yemadjro, F.S.R., Adjibabi, W., Vodouche, S.J. and Hounkpe, Y.Y.C. (2011) Prévalence des affections ORL au Centre Hospitalier Régional départemental du Borgou dans le nord-bénin. *La revue africaine d'ORL et de Chirurgie cervico-faciale*, **11**, 47-51.
- [12] Attifi, H., Hmidi, M., Boukhari, A., Touihem, N., Kettani, M., Zalagh, M. and Messary, A. (2014) Expérience oto-rhino-laryngologique de l'hôpital marocain de campagne en Guinée Conakry. *Pan African Medical Journal*, **19**, 1-8.  
<https://doi.org/10.11604/pamj.2014.19.40.4908>
- [13] Simon, D. and Bensoussan, L. (2008) *Mémo infirmier ORL, Ophtalmologie*. Masson, Paris, 158 p.
- [14] Institut National de la statistique du Mali (2017) Enquête modulaire et permanente auprès des ménages (EMOP). Rapport d'analyse premier passage.
- [15] N'djolo, A., Eposse, E.C., Bob Oyono, J.M., Fouda, O.A. and Bengono, G. (2006) La pratique ORL chirurgicale en milieu africain: Une évaluation de cinq ans et demi dans les hôpitaux de Yaoundé. *Médecine d'Afrique Noire*, **53**, 29-33.
- [16] Sauvage, J.P. (2016) *Guide d'ORL clinique et thérapeutique*. Elsevier Masson, Paris, 328 p.
- [17] ORL (2014) *Collège français d'ORL et de Chirurgie cervico-faciale*. 3<sup>e</sup> Edition, Elsevier

Masson, Paris, 352 p.

- [18] Garrouche, A., Zayani, R., Njima, H., Rejeb, A., Knani, H., Mezghani, S., Hayouni, A., Klabi, N., Benzarti, M. and Jerray, M. (2004) Profil évolutif de la tuberculose pleuro pulmonaire dans le centre tunisien de 1982 à 2002. *Revue de Maladie Respiratoire*, **21**, 58. [https://doi.org/10.1016/S0761-8425\(04\)71897-5](https://doi.org/10.1016/S0761-8425(04)71897-5)
- [19] El Ayoubi, A., Benhammou, A., El Ayoubi, F., El Fahssi, A., Nitassi, S., Kohen, A., Nazih, N., Benbouzid, A. and Kzadri, M. (2009) La tuberculose primitive ORL extraganglionnaire. *Annales d'oto-Laryngologie et Chirurgie Cervico-Faciale*, **126**, 208-215. <https://doi.org/10.1016/j.aorl.2009.06.007>
- [20] Kharoubi, S. (2008) La tuberculose miliaire du pharynx ou maladie d'Isambert. *Annales d'oto-Laryngologie et Chirurgie Cervico-Faciale*, **125**, 218-223. <https://doi.org/10.1016/j.aorl.2008.04.002>
- [21] Lahmar, J.J., Célerier, C., Garabédian, E.N., Couloigner, V., Leboulanger, N. and Denoyelle, F. (2018) Esophageal Lesions Following Button-Battery Ingestion in Children: Analysis of Causes and Proposals for Preventive Measures. *European Annals of Otorhinolaryngology, Head and Neck Diseases*, **135**, 91-94. <https://doi.org/10.1016/j.anorl.2017.09.004>
- [22] Badou N'guessan, K.E., Tanon Anon, M.J., N'guessan, N.S., Yoda, M., Bouraima, F. and Kouassi, M. (2017) Urgence ORL de l'enfant au CHU de Yopougon (Côte d'Ivoire). *Médecine d'Afrique Noire*, **64**, 91-98.
- [23] Ouoba, K., Dao, O.M., Elola, A., Ouedraogo, I., Gyebre, Y., Ouedraogo, B. and Bationo, E. (2006) Les urgences ORL au Centre Hospitalier Universitaire de Ouagadougou: A propos de 124 cas. *Médecine d'Afrique Noire*, **53**, 241-246.
- [24] Hervé, J.F., Wiorowski, M., Schultz, P., Chambres, O., Lannoy, L., Rakotobe, H., Gentine, A. and Debry, C. (2004) Activité de l'interne d'ORL durant la garde au CHU de Strasbourg. *Annales d'Otolaryngologie et de Chirurgie Cervico-Faciale*, **121**, 33-40. [https://doi.org/10.1016/S0003-438X\(04\)95488-6](https://doi.org/10.1016/S0003-438X(04)95488-6)
- [25] Doumdia Singare, K., Timbo, S.K., Kéïta, M., Togola-Konipo, F., Guindo, B., Soumaoro, S. and Ag Mohamed, A. (2011) Corps étranger de l'œsophage chez l'adulte: A propos de 26 cas. *Mali Médical*, **26**, 1-4.
- [26] N'Jock, R., Feuwou, A. and Bengono, G. (2006) Aspects épidémiologiques et cliniques du syndrome de Eagle à l'hôpital général de Douala. *Médecine d'Afrique Noire*, **53**, 182-186.