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Epidemiological, Clinical and Therapeutic Aspects of Acute Otitis Media in the Otorhinolaryngology and Cervicofacial Surgery Department of the Sikasso Hospital / Mali

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Abstract **Original Research Article**

Acute otitis media (AOM) is a viral or bacterial infection of the middle ear most often following nasopharyngitis. It is seen at any age, but particularly common in children. The aim of this work is to describe the main clinical and therapeutic epidemiological aspects of acute otitis media.in the ENT department of Sikasso hospital. This is a prospective and descriptive study carried out in the ENT department of Sikasso hospital over a period of 04 months. Two hundred and ten patients were included in this study. The following variables: Ages, sex, residence, reason for consultation, time to consultation, risk factors, clinical and therapeutic aspects were collected. The study population consisted of patients seen in the service in whom the diagnosis of AOM was retained and who gave their verbal consent/assent. We identified 210 cases of AOM in 04 months out of 1716 consultations, i.e. a prevalence of 12.20%. The average age of the patients was 14 years old, with extremes of 24 days to 75 years old, children under 05 years old accounted for 46.02%. We recorded a female predominance of 51.90%. The majority of patients 82.90% resided in the city Sikasso. I'otalgia was the main reason for consultation with 50.48%, followed by otorrhea 25.24%, hearing loss with or without tinnitus in 17.61%, the presence of foreign bodies 5.71% and traumatic causes 0.96% of cases. The average consultation time was less than one week in 74.29% of cases. Among the predisposing factors, nasopharyngitis and purulent rhinitis were associated with AOM in 64.30% of cases, followed by adenotonsillitis in 23.33%, passive smoking in 4.76% and 1 case (0.47%) of soft palate. The AOM was congestive in 57.14%, suppurative in 42.86 of which 32.38% were perforated. Treatment was with antibioticsin 90.95% of cases. The evolution under treatment was favorable at 07 days in 81.42% of cases. Two cases of paracentesis were made. Acute otitis media affects all ages, particularly common in children under the age of 5. Its treatment is based on antibiotic therapy, analgesics and nasopharyngeal obstruction.

Keywords: Epidemiological, clinical, acute otitis media, Sikasso hospital.

INTRODUCTION

Acute otitis media (AOM) is a bacterial or viral infection of the middle ear, usually accompanying an upper respiratory tract infection [1]. We distinguish topographically: acute otitis whose evolution is less than 03 weeks; subacute otitis evolving for 03 to 06 weeks and chronic otitis which goes beyond 06 weeks [2].

The diagnosis of acute otitis media is clinical, and is based on rigorous otoscopy with the association of functional and general signs [3].

AOM is seen at any age, but particularly common in children after episodes of nasopharyngitis; in adults it is of infectious, traumatic or accidental origin [2, 4-7].

It is one of the first causes of prescription of antibiotics [8, 14]. A number of these otitis can heal spontaneously despite their bacterial origin [5, 15]. The most frequent germs are Streptococcus pneumoniae Haemophilus influenzae; Moraxella catarrhalis seems to have a less important role [9-11, 14].

Acute otitis media is a frequent reasons for consultation in the service, hence the interest of this

study to contribute to better management of this pathology in the city of Sikasso on the epidemiological, clinical and therapeutic levels.

MATERIAL AND METHOD

This is a prospective and descriptive study carried out in the ENT department of Sikasso Hospital from September 01 to December 31, 2017 (i.e. 04 months).

The study population was made up of patients seen in the service in whom the diagnosis of AOM was retained after obtaining their consent.

Cases of otitis externa or chronic otitis media were excluded.

To this end, the recording of data or information on the patient was collected from an established survey sheet.

Data entry and analysis were performed using Word 2010 software and analyzed using SPSS statistics software version 19.

RESULT

From September 1 to December 31, 2017 (i.e. 04 months), 1716 consultations were carried out including 210 cases of AOM; i.e. a frequency of 12.20%.

The AOMs were distributed as follows: 120 cases of congestive; 68 cases of suppurative and 22 cases of collected.

Women were the most represented with (109/210 cases) or 51.90% and a sex ratio of 0.93.

The average age of the patients was 14 years, with extremes of 24 days to 75 years. The age group under 05 was the most represented with 46.2% and those over 45 were the least affected at 7.6% (Figure 1).

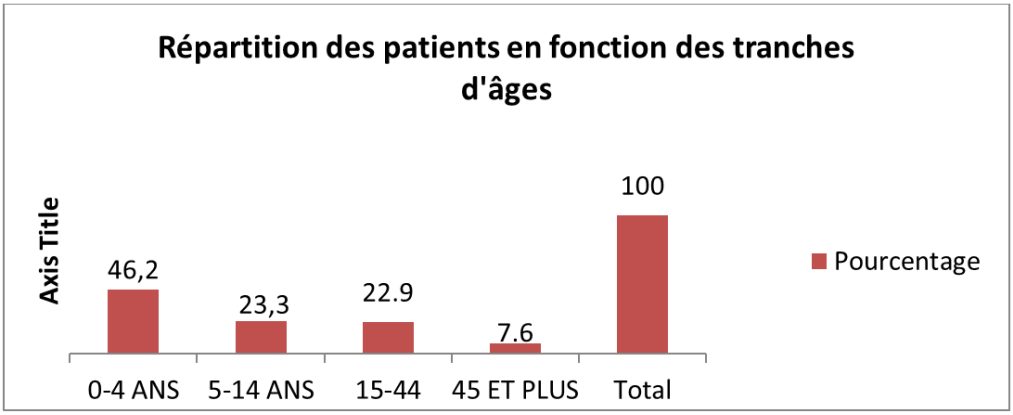

Figure 1: Distribution of patients according to age groups

Otalgia was the most common reason for consultation found in 106 patients, or 50.48%, followed by otorrhea in 53 cases, or 25.24% (Table I).

Table I: Distribution of patients according to signs and symptoms

Signs and symptoms	Effective	Percentage
Trauma	2	0.96
Foreign bodies	12	5.71
Hypoacusis with or without tinnitus	37	17.61
Otorrhea	53	25.24
Otalgia	106	50.48
Total	**210**	**100.0**

The consultation time was less than 1 week in the majority of our patients, ie 74.29% (Table II).

Table II: Distribution patients depending on the consultation period

Consultation period	Effective	Percentage
Between 1 and 3 months	07	3.33
Less than 1 month	12	5.71
Less than 3 weeks	35	16.67
Less than 1 week	156	74.29
Total	**210**	**100.0**

The risk factors and history found were the association of nasopharyngitis and suppurative rhinitis in 64.30% of cases, followed by adenotonsillitis in 23.33% of cases, passive smoking in 4.76% of patients and 01 cases of soft palate (Table III).

Table III: Distribution of patients based on risk factors/history

Risk factors/history	Effective	percentage
Velar cleft	01	0.47
Passive smoking	10	4.76
None	15	7.14
Adeno-Tonsillitis	49	23.33
Nasopharyngitis and purulent rhinitis	135	64.30
Total	**210**	**100.0**

More than half of the patients presented a clinical aspect of congestive AOM in 57.14%. The look was suppurative collected in 10.48% and suppurative-perforated in 32.38% (Figure 2).

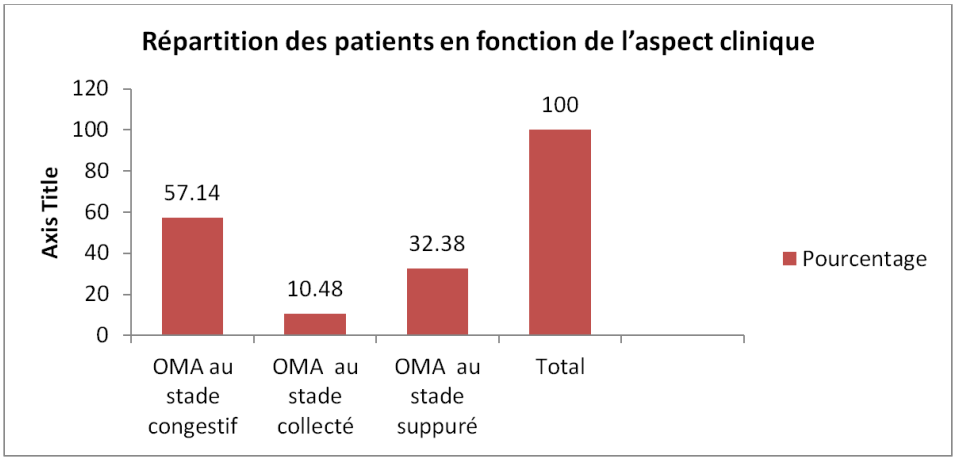

Figure 2: Distribution of patients according to clinical aspect

Systemic probabilistic antibiotic therapy was associated with ear drops in 90.95% of cases, 2 cases or 0.95% of paracentesis were performed in two infants in front of hyper-algesic collected AOM whose cultures came back negative (Table IV).

Table IV: Distribution of patients according to the drugs used

Medicines used	Effective	percentage
Paracentesis	2	0.95
Antihistamine	60	28.57
Nasopharyngeal disinfection	108	51.43
Ear drop alone	19	9.04
Analgesic	184	87.62
General and local antibiotic therapy	**191**	**90.95**

The evolution was favorable in 81.42% of our patients after 7 days of treatment, it was unfavorable in4.3% of cases and 9.52% of our patients did not come to the check-up appointment (Table V).

Table V: Distribution of patients according to evolution

Evolution function	Effective	percentage
Unfavorable	09	4.3
Not seen at control	20	9.52
Favorable	171	81.42
Favorable with adverse effect	10	4.76
Total	**210**	**100**

DISCUSSION

The aim of this work was to describe the main epidemiological, clinical and therapeutic aspects of acute otitis media in the ENT department of Sikasso hospital.

The prevalence of acute otitis media was 12.20%, it is thus close to that of Amusa, Y. B. and Coll [12] which reported a prevalence of 11.8% in Osan State, Nigeria. Howeverin Cameroon Njifou Njimah A *et al.,* [2]found an average prevalence of 5.20% in two hospitals in Douala. Eric AF Simoes *et al.,* [13] reported that in Kenya 07 out of 1000 school children had AOMT his high prevalence in our study could be due to good collaboration with the pediatric department and the other medico-surgical specialties housed in the hospital. Added to this is the fact that we are receiving more and more cases of otitis referred from peripheral centres [11, 12].

For sex, the opinions are variously divided without us having an explanation. From a slight female predominance in our study, as well as some authors [11, 12], to a male predominance for others [2, 4].

Children pay a heavy price at OMA Children under the age of 5 were the most affected in our series. This agrees with the literature [2, 6, 10]. It is recognized that the pharyngo-tubal route of contamination is the most frequent in children, because the Eustachian tube is short, gaping and horizontal [1, 2, 6, 10, 12, 13, 16]. Thus, according to the literature, most cases of AOM occur in young children aged 06 to 24 months, the incidence decreasing significantly after the age of 05 years [2, 6].

Our patients lived in the city of study in 82.90%. Rachid Ouhani [5] found that half of his study population resided in the city of Dakar.

It is recognized that pain is the first reason for consultation and sudden onset otalgia is the symptom that most often brings patients to the otological consultation [6, 10]. Thus, it was the most frequent reason for consultation with 50.48% in our series, followed by otorrhea. This state of affairs is widely encountered in series where Otalgia was even the complaint of all patients in the study by Chhetri, S. S. *et al.*, in Nepal and followed by otorrhea [3, 6, 8, 15, 17]. The consultation time of less than one week from the start of the clinical manifestation was 74.29% of cases.

Bationo, J. M. [16] had found an average delay of 07 days with extremes of 04 and 13 days. This could be due to the painful nature of the condition or even a diagnostic element for the majority (89.7%) of general practitioners in the study by Mr. Bourrous [6].

In our work, purulent rhinitis and nasopharyngitis were the most incriminated in the occurrence of AOM with 64.30% followed by adenotonsillitis 23.33%. Njifou Njimah [2] reported in his study that 40% of patients and their parents who had a history of ear infections caused by AOM were prone to repeated nasopharyngitis.

According to Bourrous, M. *et al.,* [6] In a survey on the management of AOM in children under ten by general practitioners; reported that enlarged adenoids were cited in 76.1% of cases by general practitioners, followed by viral infections of the upper airways with 70.9%.

According to the authors, nasopharyngeal infections remain the route of contamination of the middle ear par excellence [5, 6, 8, 15, 17].

The diagnosis of AOM remains clinical the congestive form was the most frequent with 57.14% followed by the form suppurative-perforated in 32.38% and suppurative collected in 10.48% cases.

These results are similar to those of Clavelin-Truchon [13] who reported 24% congestive eardrum, and 36% collected. However Njifou Njimah, A. [2] got more forms collected with 48.3%.

Treatment consists of general administration of antibiotics associated with ear drops in 90.95% of cases. According to E. Lescanne, antibiotic therapy is essential in the treatment of acute otitis media to avoid complications [9].

I depending on the clinical pictures, analgesics was used with or without nasopharyngeal disinfection. This which remains a fact in the series [2, 8, 11, 15, 17].

The evolution under treatment was favorable after 7 days. What is supported by the literature in the management of AOM [7, 8, 11].

CONCLUSION

Acute otitis media is a relatively frequent pathology in our practice. It affects all ages but especially children under 05 years old. Clinically, otalgia was the main symptom, followed by otorrhea. The treatment remains essentially based on probabilistic antibiotic therapy associated with an ear drop. Analgesics, nasopharyngeal disinfectants can also be used. Paracentesis being an analgesic and etiological gesture was little practiced in our context. The evolution under medical treatment remains favorable. Its prevention involves the management of upper respiratory infections.

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