



Child deafness in Mali

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Abstract

Objectives

The purpose was to determine the prevalence of the various types of deafness during affections currently encountered in the ear and eventually being able to have an effect on the child language.

Patients and Methods

It is about a retrospective survey having concerned 833 young patients aged from 0 to 15 years old between May 2012 and April 2014 in Reference Health Center, Unit of ENT diseases district IV Bamako Mali

Patients

Were included in this survey all the young patients whose ENT examination enabled to reveal an unspecified pathology of the middle ear and / or inner ear

Methods

Current clinical and complementary examinations (tonal audiometry, radiography of the mastoid bone, scanner...) were realized.

The audiometric patterns of 236 patients reveal:

- Conductive hearing loss is mainly encountered: 133 patients (56.35%) for the otitis media and 70 patients (29.70%) for rhinopharyngitis.
- Sensorineural hearing loss represents 14.40 % (34patients).

In analysing the causes of the acoustic neuritis we specially find out that meningitis cerebrospinalis: 30 patients (88.23%) and only 4 patients present a case due to ototoxic (quinine) drugs.

Language disorders represent 8.82% (patients) in deafness of perception and four patients (1.69%) in deafness.

Conclusion

Thus taking into account the considerable frequency of the ear diseases in Mali, the hearing disorders are specially encountered. Deafness of the sound-conducting apparatus prevails.

Cerebro-spinalis meningitis is the first cause of the acoustic neuritis in Mali.

Introduction:

Among the otorhinolaryngologic pathologies in Mali, the diseases of the ear hold the first position.

The otologic pathologies are dominated by the diseases of the middle ear (otitis media) and that of the inner ear (acoustic neuritis).

The affections lead specially to the installation of deafness in various degrees, often accompanied by serious language disorders of the mainly at very low age when he has not acquired the language yet. This article attempts to determine the prevalence of various types of deafness in Mali and how it affects the child language.

Objectives

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Patients and Methods

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Patients

Were included in this survey all the young patients whose Otorhinolaryngological examination enabled to reveal an unspecified pathology of the middle ear and / or inner ear

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Results

Table 1. The distribution of patients according to age and sex.

	<i>N</i>	<i>%</i>
<i>GENDER</i>		
<i>Male</i>	533	64 %
<i>Female</i>	304	36%
<i>Mean AGE, 6 years</i>	<i>(range 0 - 15 years)</i>	

Table 2. Current ENT diseases in children

Diseases	N	%
Otitis media	267	34.04
Rhinopharyngitis	141	17.45
Ear wax	83	10.25
Emergencies	79	9.87
Acoustic nevritis	34	4.20
External otitis	33	4.08
Others	171	21.16

The otitis media and rhinopharyngitis are frequent.

The otitis media hold the first position, 267 patients that are 34.04%.

The audiometric results of 236 patients reveal:

-Conductive deafness is mainly encountered: 133 patients (56.35%) for the otitis media and 70 patients (29.70%) for rhinopharyngitis.

Sensorineural hearing loss represents 14.40 % (34patients).

In analysing the causes of the acoustic neuritis we specially find out that meningitis cerebrospinalis: 30 patients (88.23%) and only 4 patients present a case due to ototoxic (quinine) drugs. Language disorders represent 8.82%

(patients) in sensorineural hearing loss and 4 patients (1.69%) in conductive deafness.

Discussions

Deafness is frequent with child due to various ear pathologies often encountered at this age;

In our study we have found out 875 patients(54.31 %).The child due to his young age and to his very low immunity is vulnerable and subject to many illnesses(rhinopharyngitis, otitis media, meningitis cerebrospinalis) which have negative effects on the cochleo-vestibular apparatus. Our works have revealed rates of 43.02% for otitis media and 14.40 for acoustic neuritis.

The high frequency of pathologies in middle ear is generally found out in literature (1, 2,3). Several facts seem to explain such a frequency in tropical area: rhinopharyngitis, infectious diseases, allergy

Meningitis cerebrospinalis is a dangerous affection in hot countries seeming its epidemic characters. It leads to serious cochleo-vestibular and language disorders mainly in the very young people before language acquisition (4).

Middle ear pathologies generally lead to hearing loss mainly of the transmission apparatus (5,6,3) the involvement of the internal ear at complicated stages is characterized by a double deafness seeing an increase of contagion in the perceptive apparatus of hearing (7,6).

We had mainly found out various language disorders with patients having postmeningitis cochlear neuritis (3). In our study we must equably highlight the destructive impact of quinine on cochleo-vestibular apparatus .This double hearing handicap and that of the language often creates a psychosomatic disorder of the child in his environment.

The adenoiditis has a non neglectful influence on hearing (8, 9). This affection disturbs the function of the auditory tube that is the drainage and ventilation of middle ear cavities.

The actual taking in charge of child deafness in Mali and what policy for the future?

Deafness related to pathologies of the middle ear:

-*Non dangerous otitis* benefit from therapy based on the taking into account of etiologic factors and the rational control of antibiotherapy according to bacteriology results

- *Dangerous otitis* requires a radical surgery (large mastoidectomy, tympanoplasty, ossiculoplasty ...) with the reestablishment of the collumellar effect by the reconstruction of the tympano-ossicular chain.

As to the acoustic neuritis, the cause is looked for and an etiologic and symptomatic treatment set up.

The installation of an irreversible deafness requires a hearing aids(with a need of an orthophonie rehabilitation) or cochlear implant abroad according to purchasing power of the child's parents.

Deaf-mute children are taken in charge by the very few special training schools for the children with hearing loss where the technical plate is very limited.

Difficulties in taking in charge the patients with hearing loss

- Very few efforts from the health authorities of the country
- There's practically no speech therapist for the country
- Some essential complementary examinations necessary for a better diagnosis of its patients cannot be carried out because the health structures have not got them (lack of adequate equipment)
- The hearing-aids remain generally very expensive for patients who are generally poor, the hearing aids acquired under the form of gifts are often old and badly adapted to the recipients

There is no TV broadcast for this defective layer of the population

Future policies

- Put stress on the prevention of some diseases causing serious hearing disorders
- Build more specialized schools
- Train speech therapists
- In liaison with the firms of hearing aids go for reasonable prices for country with low income
- Make prices of diagnosis equipments accessible for the poor countries, because the only obliteration of the debts of these countries cannot solve such problems. These measures arrange only some corrupt politicians of these countries.

Conclusion

Thus taking into account the considerable frequency of the diseases of the otologic area in Mali, the hearing disorders are specially encountered. Deafness of the sound-conducting apparatus prevails.

Cerebro-spinalis meningitis is the first cause of the acoustic neuritis in Mali, causing serious disorders of language for the child at a very low age. There are many difficulties to make the taking in charge of children with serious auditive disorders more adequate. The setting up of a healthy policy in this field is more than is a current event.

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