



RESEARCH ARTICLE

MORBIDITY BY OTOLARYNGOLOGICAL EMERGENCY PATHOLOGIES IN BRAZZAVILLE, CONGO: ABOUT 297 CASES.

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ABSTRACT

Objective: take stock of the morbidity of otolaryngological emergency in Brazzaville; explain our therapeutic attitudes and our results. **Patients and methods:** This was a descriptive, retrospective study of 5 years including all the patients followed in the otolaryngological department of the Talangaï reference hospital for emergency pathology. The medical records allowed the collection of epidemiological, clinical and therapeutic data. The comparison of the quantitative variables was made by the Student test. The significance threshold was set at $p < 0.05$. **Results:** a total of 297 patients with otolaryngological emergencies were collected, representing a prevalence of 4% of all otolaryngological and head and neck pathology. The average age was 18 with a ratio of 2.3 in favor of men. The average consultation time was 4 hours and the main signs were hemorrhages in the otolaryngological cavity (42.8%) followed by dysphagia following foreign bodies from the esophagus (27.3%). But laryngeal and tracheal dyspneas were rare (1.3%). All the patients were hospitalized in emergency and the evolution was favorable in the patients who had consulted within less than 6 hours ($P = 0.00019$). **Conclusion:** otolaryngological emergency are the prerogative of the young male subject. Patient survival depends on the consultation period because hemorrhages, severe infectious conditions, laryngeal and tracheal dyspneas require rapid treatment to begin before a period of 12 hours.

INTRODUCTION

Emergency otolaryngological pathology poses a double diagnostic and therapeutic problem to the presence of vital elements making the cervico-facial region a real neurosensory and vascular crossroads (1-3). Kind of morbid situation respiratory distress and hemorrhage of the upper aerodigestive tracts dislike the obsession of the otolaryngology specialist because the vital or functional prognosis depends on the speed of treatment (2-5). In the world the frequency of these emergencies varies from one author to another, but without real controversy whereas in Africa most of the work related to emergencies is dedicated to pediatrics and mainly addresses the medical aspects (6-8). Thus this work aims to take stock of the morbidity of otolaryngological emergencies in Brazzaville; to expose our therapeutic attitudes and our results.

PATIENTS AND METHODS

The otolaryngological and head and neck surgery department at Talangaï reference hospital was part of a descriptive, cross-

sectional study with retrospective data collection in the period from January 01, 2015 to December 31, 2019 (5 years). The files of patients followed for an otolaryngological and neck emergency were included in this study. All patients who did not have an emergency morbidity from a diagnostic or therapeutic point of view were not included in the study. Thus the parameters studied were epidemiological (frequency, age, sex, provenance), clinical (history, reason for consultation, consultation period, diagnosis retained), therapeutic (medical, surgical) and progressive. For data analysis, the X^2 test was used for the comparison and correlation of several observed distributions in order to define the independence of two qualitative variables. The comparison of the quantitative variables was made by the Student test. The significance threshold was set at $P < 0.05$.

RESULTS

A total of 7303 patients were followed in the otolaryngology department of the Talangaï referral hospital for various pathologies. Among these patients, 297 had presented with otolaryngological emergencies representing a frequency of 4% of all otolaryngological and head and neck pathologies.

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Table 1. Distribution of patients by age and sex

| Sex | Male | Feminine | Total |
|----------|-----------|-----------|------------|
| Age (an) | n (%) | n (%) | n (%) |
| < 20 | 144(48,5) | 45(15,15) | 189(63,65) |
| 20 - 39 | 59 (19,9) | 45(15,15) | 104(35,05) |
| 40 - 59 | 1(0,3) | 0 | 1(0,3) |
| ≥60 | 3(1) | 0 | 3(1) |
| Total | 207(69,7) | 90(30,3) | 297(100) |

n : number, % : percentages

Table 2. distribution of patients according to the signs of call and the diagnosis retained

| Signs of call | Diagnosis retained | Total n (%) |
|-------------------|-------------------------------|-------------|
| Epistaxis | — | 109(36,7) |
| | Facial trauma | 42(14,1) |
| | high blood pressure | 35(11,8) |
| | idiopathic | 32(10,8) |
| Otorrhage | Temporal trauma | 18(6,1) |
| Dysphagia | Esophageal foreign body | 81(27,3) |
| Facial swelling | Neck cellulitis | 74(24,9) |
| cervical wounds | penetrating sores on the neck | 11(3,7) |
| Laryngeal dyspnea | — | 4(1,03) |
| | laryngeal papillomatosis | 3(1) |
| | laryngeal carcinoma | 1(0,3) |
| Total | — | 297 (100) |

n: number, % : percentages

Table 3. distribution of patients according to the treatments received

| Treatments received | Total n (%) |
|-------------------------|-------------|
| Analgesic* | 109 (100) |
| Antibiotic** | 74 (24,9) |
| Incision-drainage | 74 (24,9) |
| Anterior tamponade | 108 (36,4) |
| Foreign body extraction | 81 (27,3) |
| Exploratory cervicotomy | 11 (3,7) |
| Tracheotomy | 4 (1,03) |

: Paracétamol; Ceftriaxone + Métronidazole (n=66, soit 22,2%), Amoxicillin clavulanic acid (n=7, soit 2,4%), Ciprofloxacine + Métronidazole (n=1, soit 0,3%)

Table 4. Evolution and consultation period

| Evolution Period | Living n(%) | deceased n(%) | Total n(%) | P |
|------------------|-------------|---------------|------------|---------|
| < 6h | 173(58,2) | 0 | 173(58,2) | |
| 6 – 12h | 99(33,3) | 0 | 99(33,3) | 1 |
| >12h | 0 | 2(0,7) | 25(8,5) | 0,00019 |
| Total | 295(99,3) | 2(0,7) | 297(100) | |

n: number, % : percentages

Average age was 18 ± 13.56 (range: 6 months to 65 years), there were 207 men (69.7%) and 90 women (30.3%) for a ratio of 2.3 as shown in Table I. Most of the patients came from their homes (n = 287, or 96.6%), followed by those referred by private medical offices (n = 10, or 3.4%). No patient had a specific history and the average consultation time was 4 hours ± 0.8 (range: 45 minutes to 48 hours). The majority of patients consulted before 6 hours (n = 173, or 58.2%) followed by 6-12 hours (n = 99, or 33.3%) and beyond 12 hours (n = 25, or 8.5%). The main warning signs were nasal hemorrhage (n = 109, or 36.7%) followed by dysphagia by the presence of esophageal foreign bodies (n = 81, or 27.3%) including 75 coins (25, 2%), 4 plastic objects (1.4%) and 2 dental prostheses (0.7%). Neck cellulitis came third (24.9%). Tables II and III respectively show the distribution of patients according to the signs of the call and the diagnosis retained, as well as the distribution of patients according to the treatments received.

The average length of hospital stay was 5 days (range: 1-11 days). According to the evolution, healing was observed in patients who had consulted within less than 6 hours (%) while the deceased had consulted after 12 hours. This difference was statistically significant as presented in Table IV (P = 0.00019). At the end of the study, two patients had died (0.7%), one of whom suffered from hemorrhagic shock and the other from infectious shock.

DISCUSSION

Otolaryngological emergency are not uncommon in the light of the literature. If this series reports a frequency of 4% of all otolaryngological and head and neck pathology, KEITA in Guinea and LAWSON in Togo respectively report a frequency of 14.46% and 16.5%, much higher than ours (9,10). In our context, these were mostly young people under the age of 20 (63.5%) followed by those aged 20 to 39 (33.05%) with an average age of 18 years. The strong male predominance (ratio = 2.3) and young age observed in our series brings our results closer to those of several authors. This is the case of KEITA in Guinea and SEREME in Burkina Faso who report an average age of 19 and 23 years respectively (9, 11). For these authors, the male subjects are the most exposed to otolaryngological emergency pathology to several factors, namely: physical hyperactivity, socio-professional stress, as well as alcohol and tobacco intoxication. However, other authors like ONDZOTTO in Congo report in 2009 a slight female predominance of 56% (12).

For the author, it was only the child's otolaryngological emergency at the Brazzaville university hospital center, which probably could explain the difference in the distribution of sex with our results. The majority of our patients came from their homes (96%) while only a tiny part were referred by private medical practices in Brazzaville (3.4%). Faced with otolaryngological (hemorrhagic and respiratory) emergency, patients prefer large public hospitals for fear of serious or even fatal complications. (12) However, consultation times vary from one author to another and range from a few minutes to a few hours. If in this series this average time was 4 hours (45 minutes - 48 h), some authors report delays of 10 to 20 minutes thanks to the agility of the firefighters (9) while others report an average 12 hours before admission (13). Otolaryngological emergency are diverse depending on the location and varied according to their frequency (10, 12). In this series, hemorrhagic emergencies (epistaxis) come first followed by dysphagia by the presence of foreign bodies from the esophagus and neck cellulitis. However, according to the literature, some authors report that otolaryngological infections rank first (9) while for others it is maxillofacial trauma well before foreign bodies all sites combined and otolaryngological infections (14-16). The epistaxis reported in our series was a common sign in several emergencies, including facial trauma, high blood pressure and idiopathic causes. The latter category of causes was responsible for spontaneous epistaxis or the onset of rhinitis, but most often minimal and intermittent. EMINY et al (14) report that epistaxis constitutes a true medical emergency because it is likely to be life-threatening immediately in the event of abundant blood loss. Whatever the cause, the treatment of epistaxis must be done immediately, taking into account the patient's hemodynamic state. We were able to carry out urgently 108 previous anterior tamponade out of a total of 109 cases of epistaxis which were received in consultation.

One patient was unable to benefit from the anterior tamponade because he was received almost in a state of apparent death following hemorrhagic shock. Among these haemorrhagic emergencies penetrating wounds of the neck were observed in a significant proportion of 3.7%. These were assaults and attempted stabbing autolysis with platysma involvement. In all cases these wounds were hemorrhagic without respiratory distress. Management was done in each case by emergency exploratory cervicotomy under general anesthesia, and then on discharge patients had undergone a psychiatric consultation in order to avoid recurrences in those who had attempted suicide. The foreign bodies of the esophagus were diverse in nature, but management was the same by extraction under general anesthesia using an esophagoscope in all cases. However TOGO S et al (13) report rare cases of spontaneous expulsion (5.5%), or even surgery by esophagotomy in cases of accidental ingestion of dentures (2.7%). These cases of accidental ingestion of dentures are often the prerogative of adults, many authors report (17, 18). For these authors, the ingestion of dental prostheses in adults comes from the fact that the food does not come into contact with the lining of the palate and this generates painful esophageal symptoms with total aphagia and hyper salivation. In these conditions the extraction with the forceps must be gentle in order to avoid any esophageal perforation. If trauma and foreign bodies of the esophagus occupy the first two rows of otolaryngological emergency pathology, and neck cellulitis are real medical and surgical emergency. In the present series, it was exclusively purulent sub-hyoid collections with fluctuation zones whose exploratory punctures brought back each time pus franc. In all cases, the origin of these cellulites was dental and the medical and surgical treatment was that of an incision-drainage associated with probabilistic antibiotic therapy.

The molecules used were the combination Ceftriaxone - Metronidazole (22.2%), or Amoxicillin-clavulanic acid (2.4%) or even Ciprofloxacin - Metronidazole (0.3%) in case of known intolerance to Beta- lactams. This probabilistic antibiotic therapy was administered to all patients upon admission, but we noted a case of death in a patient received late in septic shock. According to the literature, the frequency of head and neck cellulite varies from one series to another, however all the authors are unanimous on their extreme gravity (9). If certain authors like BENNANI-BAÏTI (19) report 80% of the causes linked to the use of non-steroidal anti-inflammatory drugs in self-medication, other authors on the other hand report poor oral hygiene especially in the elderly (20). Certainly the multifactorial aspect on the cause of these infections the clinical aspect is that of a semi-mandibular or cervical swelling above and / or sub-hyoid inflammatory in appearance whose treatment remains medico-surgical (9, 20). Respiratory emergencies are infrequent as reported by some authors, but in children they are of extreme gravity that the symptomatology must be recognized because of the life threatening issue (21, 22). Our series reports on four cases of laryngeal dyspnea, including one patient known for laryngeal carcinoma and three children for laryngeal papillomatosis. Management was done urgently by rescue tracheostomy and then, secondarily for children, the procedure was completed by endoscopic excision of the papillomas with forceps. The clinical course was favorable followed by decanulation on the seventh day in children. This attitude is close to that reported by MAIGA S et al in Senegal (23) who recommends early cannula removal in order to avoid complications such as tracheal stenosis in children.

Conclusion

ENT emergencies are the prerogative of the young male subject. Patient survival depends on the consultation period because hemorrhages, severe infectious conditions and laryngotracheal dyspneas require rapid management to start in less than 12 hours.

Conflict of interest: The authors declare no conflict of interest in relation to this article.

Contribution of authors:

- Otouana Dzon HB, Nguouoni GC, Diembi S: design, documentary research, writing;
- Itiere Odzili FA, Ondzotto G: critical reading.
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