



# Practice of ENT Ambulatory Surgery: A Secondary Referral Health Center Experience

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## Abstract

**Introduction:** Ambulatory surgery can be defined as a surgical procedure, performed in an operating room, on a patient who will return home the same day. For an ENT procedure to be performed on an outpatient basis, the patients or parents must agree to this option but also meet certain psychosocial-environmental criteria.

Our objective was to study the epidemiological and therapeutic profile of patients. Who underwent outpatient surgery at the ENT department of the Reference Health Center of Bamako's Commune I.

**Methods:** We conducted an observational, descriptive and retrospective study from October 2021 to October 2022.

**Results:** This study allowed us to identify 52 surgical procedures performed during this period, only 35 patients had a complete file. They were aged from 6 to 55 years with a sex ratio M/F of 0.52. Tonsillectomy was the most performed surgical procedure (37.14%), followed by type I tympanoplasty. The most used anesthetic method was general anesthesia in 68.57% of the cases. The average length of hospitalization was 6.5 h ranging from 4 h to 8 h. No major accidents were noted during the surveillance related to the ambulatory aspect of the surgery. Patients were satisfied in 97.14% of cases.

**Conclusion:** Well-conducted outpatient ENT surgery is a very good alternative in our second referral hospitals, especially during the COVID-19 period when the availability of beds and qualified personnel is often lacking. However, it would benefit from being well codified and supervised in our context.

**Keywords:** Ambulatory surgery; ENT; Monitoring; Second line hospital

## Introduction

The concept of ambulatory surgery has been implemented in developed countries to reduce the cost of surgery and improve access to health services, and several countries are showing a desire to extend this activity, particularly in the field of ENT [1-4]. Adopted by the Executive Committee of the International Association of Ambulatory Surgery (IAAS) in 2003 [5], then confirmed by the WHO and the European Observatory on Health Systems and Policies in 2007 [6], "ambulatory surgery is defined as a surgical procedure that is planned without requiring a hospital stay but with facilities for recovery. The entire procedure should not require an overnight hospital stay". The healthcare system environment is constantly evolving to meet new health challenges [7]. ENT surgery is particularly well suited to the selection criteria for outpatient surgery [8]. Its prevalence in France was 42.7% in 2013 [9]. Some authors estimate that the use of outpatient surgery in developing countries was low [7,10].

The interest of this surgery lies not only in the economic aspect through a reduction in costs for both the hospital and the patient, but also in the optimization of the time spent using the infrastructures and the operating rooms and the reduction of the risks of infections associated with care. The COVID context in the ENT Department of the referral health center in Commune I of Bamako was also a factor favoring the adoption of this practice, since the hospital staff was understaffed, patients were less inclined to stay in the hospital, and above all, the growing number

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of scheduled surgical procedures not performed.

The objective of our study was to identify the indications and limitations of outpatient surgery in the ENT and Head and Neck Surgery Department of the referral health center in commune I in Bamako.

### Materials and Methods

Our study was observational, descriptive and retrospective from October 2021 to October 2022 carried out at Referral Health Center in Commune I.

**Study population:** All patients operated on in the department and discharged on the same day.

**Study setting:** The ENT and Head and Neck Surgery Department of Referral Health Center in Commune I of Bamako district is located on the left bank of the Niger River. It has 12 inpatient beds that it shares with the medicine department and one day/week of intervention.

**Inclusion criteria:** Patients with a complete follow-up file, which underwent ENT surgery and was discharged on the same day with no notion of readmission.

**Selection criteria:** Live near the center, be accompanied, not live alone, have a telephone contact, be able to understand and apply the instructions of care, obtain the agreement and availability of the anesthesiologist and the surgeon, not have presented active bleeding post or pre operation, not present a history of cardiopathy, pneumological disorder, neurological degradation or thrombosis, homeopathy including sickle cell disease.

**Variables studied:** Sociodemographic: Age, sex, profession; surgical procedures performed type of anesthesia, duration of surgery, and duration of hospitalization, postoperative surveillance, re hospitalization rate and patient/parent satisfaction. Data were entered into SPSS.

### Results

During the study period, 56 surgical procedures were performed. We operated on 35 patients on an outpatient basis with full follow-up, representing 62.5%.

The average age was 15.63 years with extremes ranging from 6 to 55 years. The sex ratio M/F was 0.52. The occupations found were student in 51.55% followed by house wives in 25.71% of cases. The surgical procedures performed were tonsillectomy (37.14%) followed by type I tympanoplasty (28.57%). The most common type of anesthesia used was general anesthesia in 68.57% of cases (Table 1).

The average hospital stay was 6.5 h with extremes ranging from 4 h to 8 h. The average operating time was 1 h 45 min with extremes ranging from 1 h to 2 h 30 min.

Immediate postoperative surveillance noted pain in 2 patients (5.71%) at 1 h post-op, calmed by taking analgesic 1.5 h later, and nausea: 2 cases (5.71%), no case of vomiting or hemorrhage. Delayed postoperative monitoring consisted of a telephone call after 6 h of surgery and then 24 h. Patients were seen again at 48 h postoperatively, sometimes 5 days later (Table 2). There hospitalization rate was 0%, patient/parent satisfaction was 97.14%.

### Discussion

In Sub-Saharan Africa, ambulatory surgery constitutes an

**Table 1:** Type of surgery according to type of anesthesia.

Type of intervention Surgery	General Anesthesia	Anesthesia locale	Percentage (%)
Tonsillectomy	13	0	37.14
<b>Otologic surgery</b>			
Tympanoplasty type I	1	9	28.57
Mastoidectomy	1	0	2.86
Diabolo placement	1	0	2.86
Pretragal fistula	1	0	2.86
<b>Endonasal surgery</b>			
Meatotomy	3	1	11.43
Polypectomy	0	1	2.86
<b>Cervical</b>			
Adenoma of the submaxillary gland	2	0	5.71
Facial neurofibromatosis	1	0	2.86
Palate trauma	1	0	2.86
Total	24	11	100

**Table 2:** Immediate post-operative monitoring.

Monitoring (hour)	Pain	Vertigo	Vomiting/nausea	Hemorrhage
<1	2	1	0	0
1-4	0	1	2	0
>4	0	0	0	0

innovation, more than a challenge or an issue, ambulatory surgery constitutes for this continent an opportunity to massively increase access to care for the greatest number. There are very few publications on the subject in Sub-Saharan Africa [11]. In Europe, the management of hospitalization of patients has been profoundly modified as a result of the continuous improvement of medical practice as well as cultural and economic factors by a growing trend of outpatient surgery [12]. Several studies have shown that outpatient surgery would benefit patients, free up hospital beds and save money for health care systems [13].

During the study period, 56 surgical procedures were performed, 35 of which were ambulatory, representing 62.85%. High rate compared to those in France (43%), low compared to those in Great Britain (79%), USA (83%), but relatively low compared to those in ambulatory surgery units in France (89%) in 2016 [14].

This high rate in our context can be explained by the fact that we have few inpatient beds, few qualified personnel and an increased number of patients waiting for surgery related to COVID-19, a pandemic that disrupted surgical practice worldwide [10,15].

General anesthesia was predominant probably related to the fact that tonsillectomy was the preponderant surgery and is systematically performed under general anesthesia, moreover the study population was relatively young.

The surgical profile found was comparable to that of the Bicetre Hospital in 2014: Tonsillectomy (38.9%), otologic such as type I tympanoplasty, mastoidectomy and diabolo pause (34%), rhinologic such as meatotomies for chronic sinusitis or aspergillosis or removal of the cyst of the palatine canal could be performed in particular in the ambulatory context. According to Bingham, the majority of routine ENT surgeries (nose, oropharynx and ear) could be performed in an

ambulatory surgical setting [16].

The average operating time was approximately the same as that of Zaman who found 56.5 min plus or minus 20 min [17], probably due to the fact that routine surgery was essentially performed.

The postoperative pain in our study was encountered with in the first 2 h postoperatively and was calmed by the use of infusion of level I analgesic, less than that found in the literature, particularly in children. Indeed, research indicates that up to 75% of all children undergoing surgery in the United States experience significant postoperative pain [18].

We noted 2 cases of immediate postoperative nausea and dizziness probably related to the use of general anesthesia but resolved 2 h later. According to Gundzik, Postoperative Nausea and Vomiting (PONV) is an important problem in ambulatory surgery that can lead to delayed discharge, increased costs and decreased patient satisfaction, but in our study, only nausea was encountered and was ephemeral and without consequences related to the use of general anesthesia [18]. We did not note any case of hemorrhage after 6 h 30 min post-op, which could constitute a contraindication to day time discharge [19].

We did not observe any readmission because according to the literature, ENT surgeries are safe procedures with a low re admission rate [11,16,20].

The patient/parent satisfaction rate was quite high, which can be explained by the fact that efficiency and safety were a priority in ambulatory surgery procedures, but above all by the fact that communication was an essential factor in the success of the operation and stimulated the patient's self-confidence insofar as he or she was part of a project in which he or she was the main character, thus requiring active participation, and responsible involvement.

## Conclusion

Ambulatory surgery, if well conducted, is a very good alternative in our second referral hospitals where the availability of beds and personnel is often lacking. It is more and more practiced, especially in ENT, hence the need for a good codification and a good supervision in our context.

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