



## ENT ENTOSCOPY AT THE KANKAN REGIONAL HOSPITAL

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### ABSTRACT

**Introduction:** Endoscopy is a means of investigation and therapy in ENT.

The purpose of our study was to evaluate its indications and results of endoscopy in the ENT department of the Kankan Regional Hospital.

**Methodology:** This was a retrospective descriptive study lasting three (3) years from January 2015 to December 2017. Our variables were epidemiological, clinical, diagnostic, therapeutic and progressive.

**Results:** During these three years, 372 endoscopies were performed. Male predominance was observed (70%) with a sex ratio of 2.33. Children in the 1 to 10 age group were the most affected (48%) with an average age of 43.23 years. Endoscopy was therapeutic in 74.4%. Foreign bodies of aerodigestive pathways were the main indications (64%). Oesophagoscopy was the most commonly used type of endoscopy (53.8%) in our study and follow-up of tracheobronchoscopy (48.4%). Extraction of the foreign body was the mainstay of the endoscopic treatment (69.9%). The evolution was favorable with simple operative follow-up in 98.2% of patients.

**Conclusion:** endoscopy is an important part of our practice for the exploration of airways. It would clarify the diagnosis and treatment of certain conditions.

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## INTRODUCTION

Otorhinolaryngology (ENT) is a medico-surgical specialty that deals with pathologies of the upper aerodigestive tract (VADS) (Cuisnier, 2004). Among the means of investigation in ENT is endoscopy as a component of the systematic assessment of the ENT examination and it is also a therapeutic means. It is of paramount importance, requiring expensive equipment and the development of maintenance for the long life of this difficult acquisition material in developing countries (Akolbout, 2003 and Ouaba, 2007). Endoscopy can be performed under local anesthesia, under neuroleptanalgesia or under general anesthesia, which implies good collaboration between the ENT

endoscopist and the anesthesiologist (Mohamed, 2001). Our study will be devoted to that performed under general anesthesia. The main indications of endoscopy are variable. Its frequency is variable in the literature. Several authors report a frequency that varies between 11.74 and 41% (Deguenonvo, 2009). It seemed to us necessary to carry out this second study in a Regional Hospital of Guinea.

## MATERIAL AND METHODS

We were interested in the files of all the patients admitted for an endoscopy in the ENT department of the HRK from January 2015 to December 2017 without distinction of age and sex. This was a retrospective descriptive study lasting three (3) years. We conducted an exhaustive recruitment, including all the complete files of the patients admitted for endoscopy ENT and who benefited from a follow-up postoperative during the

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study. Our variables were epidemiological (frequency, age, sex), clinical (reasons for consultation), diagnosis (indications), therapeutic (endoscopies) and evolutionary (complications related to endoscopy). We performed a descriptive analysis of the population using the software Epi-Info 7.2.0.

## RESULTS

**Table 1. Frequency of aerodigestive tract endoscopies compared with surgical procedures**

Surgical Acts	Number of cases	%
Endoscopy	372	36.0
Tonsillectomy	253	24.5
Adenoidectomy	196	19.0
Ear surgery	55	5.3
Thyroidectomy	43	4.2
Endonasal surgery	43	4.2
Maxillectomy	12	1.2
Exploratory cervicotomy	10	1.0
Autre*	55	5.3
Total	1033	100

\* Other: face and neck wound trimming, laryngectomy, parotidectomy, keloid scar excision, lymph node biopsy and tracheostomy.

**Sex:** There were 350 male patients (70%) with a sex ratio of 2.33.

**Age:** Children in the 1 to 10 age group accounted for 240 cases (48%) with an average age of 43.23 years ( $\pm 15.4$ ).

**Table 2. Distribution of files according to indications of endoscopy**

Indications of endoscopy	Number of cases	%
Foreign bodies of aerodigestive tract	238	64.0
Tumor of the larynx	70	18.8
Oesophageal pathologies	45	12.1
Tonsillary tumor	13	3.5
Tumor of the pharynx	10	2.7
Total	372	100

**The purpose of endoscopy:** Endoscopy for therapeutic purposes was the most used (74.4%) and allowed the extraction of foreign bodies or biopsy suspicious lesions (tumors).

**Table 3. Distribution of patient records by type of endoscopy**

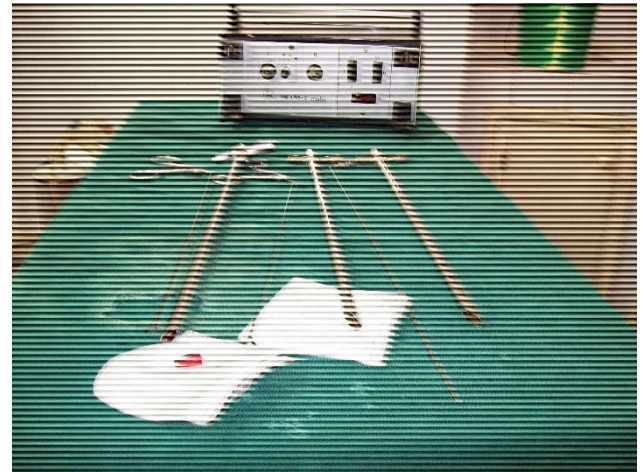
Type of endoscopy	Number of cases	%
Esophagoscopy	200	53.8
Tracheobronchoscopy	180	48.4
Laryngoscopy in suspension	100	26.9
Panendoscopy	20	5.4
Total	372	100

**Table 4. Distribution of patients' files according to the results of the endoscopy and the actions performed**

Results of the endoscopy	Number of cases	%
Foreign body extraction	260	69.9
Biopsy	52	14.0
Stenosis of the esophagus	44	11.8
Edema of the epiglottis	15	4.0
Total	372	100

### Evolution

Operative follow-up was simple in 98.7% of patients and complicated by 3 (1, 3%) cases of related deaths (2 cases of oesophageal perforations and 1 case of laryngospasm).



**Figure 1. Endoscopy equipment**



**Figure 2. Foreign body "Trombone" extracted from the left bronchus in a child of 08 years**

## DISCUSSION

**Frequency:** from January 2015 to December 2017 or 3 years, out of a total of 1033 patients admitted to the block, 372 endoscopies were performed at HRK's ENT department, is a frequency of 36%. We noted a monthly incidence of 10.33 cases and an annual incidence of 124 cases. This frequency is very variable in the literature. In Africa, several studies have been conducted in this direction. Our result is superior to that reported by these authors Mohamed et al. in Mali (2001) reported 374 endoscopies in 10 years. This difference could be explained by the fact that the Kankan ENT service would be the reference structure for rigid ENT endoscopy. In addition to patients from the Kankan region, our service receives patients from the surrounding prefectures of Sierra Leone, Mali and Côte d'Ivoire.

**Gender:** The male predominance (70%) in our series is comparable to that of Cusnier et al. in 2004 in France, in their study on the surgical and endoscopic management of non-tumor acquired tracheal stenoses which reported a male predominance with a sex ratio of 1.9.

**Age:** The average age of our patients was 43.23 (15.4) years old. It appears that the maximum endoscopy was performed in children between 1 to 10 years (48%) and followed those aged 11 to 20 years (12%). This finding has also been reported by African authors Mohamed et al. in 2001 in Mali, Akolbout et

al. in 2013 in Congo. Deguenonvo in Senegal. This result could be explained by the high frequency of ingestion or inhalation of foreign bodies in children.

**Endoscopy goal:** Therapeutic endoscopy was the most used 276 (74.2%), followed by those for diagnostic purposes (25.6%). Mohamed et al., who conducted a study similar to our study, had achieved a 95% therapeutic endoscopy result, which is superior to our outcome. The predominance of endoscopy for therapeutic purposes is related to the high frequency of aero-digestive foreign bodies, requiring endoscopy for their extraction. It should be noted that the extraction of certain foreign bodies especially from the lower respiratory tract has been difficult.

**Indication of endoscopy:** the main indication of endoscopies was foreign bodies (64%). This result is similar to that found by Akolbout et al, who reported that foreign bodies in the airways were the main indication at 46%.

**Type of Endoscopy:** Oesophagoscopy was the most commonly used type of endoscopy with 53.8%. Direct suspension laryngoscopy ranked third with 26.9% of cases. This result varies by region. Mohamed et al. in Mali reported that oesophagoscopy was the only act that observed an increasing progression of its frequency in their series and which was mainly requested for extractions of foreign bodies. In addition, Akolbout et al. in Congo used direct laryngoscopy in 54.29% of cases. In the majority of cases the endoscopic treatment was the extraction of foreign bodies 69.9%. This result is similar to that of some African authors.

**Evolution:** it was favorable with simple operative follow-up in 98.7% of patients, we recorded 3 (1.3%) cases of death. We had 2 cases of oestracheal fistulas caused by foreign bodies (fishbone) and 1 case of laryngospasm after bronchoscopy for difficult extraction of a pin in the left bronchus. The favorable evolution is due to the predominance of foreign bodies whose atraumatic extraction has led to the disappearance of discomfort and is generally favorable according to the literature. It could also be explained on the one hand by the good management of endoscopies in terms of infection prevention. From this fact all endoscopes are properly reprocessed in the service.

Kramer et al. have reported that repeated diagnostic and therapeutic endoscopies can lead to nosocomial infections through the use of the endoscope if reliable reprocessing is not performed after use. In addition, regularly treated endoscopes could be contaminated by staff, the workplace or patients and therefore represent a source of contamination.

## Conclusion

ENT endoscopy retains an important place in the exploration of the aero-digestive pathways of the ENT sphere. Its strengths are important both diagnostically and therapeutically. Continuous training of young ENT specialists is a necessity in the efficient management of endoscopic ENT pathologies.

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