



## RESEARCH ARTICLE

# Results of Upper Gastrointestinal Endoscopies in Elderly Patients at the General Hospital of Grand Yoff, Dakar, Senegal.

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### Abstract

**Introduction:** the establishment of a free health care program for people aged 60 and over in Senegal for the last 10 years offers us the opportunity to study the particularities of upper gastrointestinal endoscopy (UGIE) and to determine the prevalence of the most commonly encountered lesions in these elderly subjects.

**Patients and methods:** This is a retrospective study from January 2014 to May 2017 at Grand Yoff General Hospital in Dakar (Senegal). All UGIE reports for subjects aged 60 and over have been collated. Data collection and analysis was performed with Sphynx V5 software.

**Results:** The exploited reports were 943 (15.5% of all UGIE). The average age of the patients was 68 years and the sex ratio 0.82. Indications were dominated by epigastralgia (55%) and GERD (14.6%). Lesions were present in 730 patients (77.4%). The most frequent esophageal lesions were hiatus hernia (26.8%), peptic esophagitis (24.4%) and varices (21.9%); esophageal cancers were found in 22 patients (2.3%). Gastritis and ulcer were the most common gastric lesions. Histology found *Helicobacter pylori* in 66.2% of cases. Gastric cancers were noted in 24 patients (2.5%). Duodenal lesions were dominated by bulbitis (51.5%) and ulcers (46.9%). In 11.3% of patients, the indication was gastrointestinal bleeding and peptic ulcer and esophageal varices were the main causes. The tolerance of the UGIE was excellent or good in 88% of patients.

**Conclusion:** The UGIE in elderly patients in Dakar are well tolerated and it reveals frequent lesions dominated by gastritis and peptic ulcer; Esophageal and gastric cancers also play a significant role.

**Keywords:** Upper Gastrointestinal Endoscopy, Elderly Patients, Gastritis.

### Introduction

Many gastrointestinal disorders have an increased incidence and prevalence, depending on the age of the patients [1]. Associated comorbidities are common in the elderly group. Life expectancy in the Senegalese population is 63.5 years for men and 65.8 years for women [2]. The elderly represent 3.6% of the Senegalese population and the establishment of a social program called “SESAME” since 10 years has allowed them to receive free medical care. It has long been shown that digestive endoscopy is a safe and well tolerated exam and therapeutic procedure even in very old patients [3]. It's in this context that we conducted this study whose objectives were to report the particularities of upper gastrointestinal endoscopy (UGIE) in elderly Senegalese subjects and to determine the prevalence of most commonly encountered lesions in this population.

### Patients and Methods

It was a retrospective study from January 2014 to May 2017 at Grand Yoff General Hospital in Dakar (Senegal). All UGIE reports for subjects aged 60 and over have been collected. Examinations were performed without anesthesia or premedication; Fujinon and Olympus video endoscopes were used. Using Sphynx V5 software, we collected and analyzed

data on age, sex, indications, exam tolerance, incidents and accidents, description of lesions noted and the histological results of biopsies performed.

### Results

Nine hundred and forty-three reports were collected (15.5% of all EOGDs). The average age of the patients was 68 years (range 60 to 94 years) and the sex ratio 0.84 (512 women). The UGIE indications were dominated by epigastralgia, gastroesophageal reflux and dysphagia; several indications could be found in the same patient and the most common are shown in Table 1. The safety of the examination was considered excellent or good in 830 cases (88% of the patients), average in 76 cases (8% of the patients) and bad in 37 cases (4% of the patients) and no accident or incident had been noted during the exams. The UGIE was normal in 213 patients (22.6% of cases). Lesions were visualized in 730 patients (77.4% of cases) and they were esophageal (31.9% of cases), gastric

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Indications	Numbers of Patients	Frequencies
Epigastralgia	523	55,4 %
Gastro-esophageal reflux	138	14,6 %
Dysphagia	104	11,02 %
Several vomiting	72	7,6 %
Hematemesis	63	6,7 %
Portal hypertension	55	5,8 %
Dyspepsia	53	5,6 %
Melena	43	4,5 %
Hiccups	27	2,9 %
Pyloroduodenal stenosis	15	1,6 %
Diffuse abdominal pain	14	1,5 %

**Table 1:** The indications of upper gastrointestinal endoscopy in our elderly patients.

Lesions	Numbers of patients	Frequencies
Gastritis	419	44,4 %
Gastroduodenal ulcers	131	13,6 %
Gastric: 67		
Duodenal: 64		
Hiatal hernias	79	8,4 %
Peptic esophagitis	72	7,6 %
Duodenitis	64	6,8 %
Esophageal varices	47	4,9 %
Esophageal candidiasis	43	4,5 %
Gastric cancers	24	2,5 %
Polyyps	22	2,4 %
Esophageal: 4		
Gastric: 11		
Duodenal: 7		
Esophageal cancers	22	2,3 %
Portal hypertensive gastropathy	15	1,6 %
Schatzky's ring	13	1,4 %
Duodenal diverticula	13	1,4 %

**Table 2:** Noted lesions in our elderly patients.

(52.9% of cases) and duodenal (15.2% of cases); they are shown in Table 2. Histology showed chronic *Helicobacter pylori* gastritis in 66.2% of cases where gastric biopsy results were available. Gastric cancers found in 24 patients (2.5% of cases) and all of them were adenocarcinomas. Esophageal cancers found in 22 patients (2.3% of cases) were squamous cell carcinomas in 90% of cases and adenocarcinomas in 10% of cases. Peptic ulcer and esophageal varices were the main causes of upper gastrointestinal bleeding with 39.9 and 25.7% of cases, respectively.

## Discussion

Similar data have been reported in Africa among older people regarding age and sex ratio [4, 5]. In Senegal, the sex ratio in the general population and in the population of elderly subjects is 0.99 and 0.90 respectively [2]; this female predominance is more marked in elderly patients receiving an UGIE examination with a sex ratio of 0.84 in our study. This finding could be explained in part by higher mortality in men at this age, but also by greater use of older women of potentially gastrotoxic drugs. As in other

series in the elderly, the indications of the UGIE are dominated by epigastralgia (Table 1) [4, 5] and this is explained by the diversity of pathologies that can manifest itself by this symptom. Indeed these epigastric pain can express an abnormality in the upper digestive tract but also abdominal and even thoracic appendix organs. The proportion of normal UGIE is lower in the older patient series than in the no-age group of patients [6, 7]. In relation to the high prevalence of *Helicobacter pylori* infection in southern countries, gastritis is the most common lesion (Table 2). In the elderly, gastric ulcers predominate in duodenal ulcers; although *Helicobacter pylori* plays a major role in their occurrence, gastrointestinal drug intake due to comorbidities associated with this age is also strongly implicated [8]. Portal hypertension lesions are less common in elderly patients compared to young adults in Africa. Indeed, these portal hypertension lesions are mainly reported in middle-aged adults and are first linked to viral cirrhosis B in Senegal [9]. Recent data point to an extremely high incidence of esophageal cancer, but relatively low rates of stomach cancer in sub-Saharan Africa [10]. Although a true reality, cancers of the stomach and esophagus have a relatively low prevalence in our series. Esophageal cancer is found in Senegal in subjects under 60 years in 70% of cases and in the stomach the average age of patients is 58 years [11, 12].

## Conclusion

The UGIE in elderly patients at Grand Yoff General Hospital in Senegal is well tolerated and reveals lesions dominated by gastritis and peptic ulcer. Esophageal and gastric cancers also play a significant role.

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