
PRESENTATION OF PRIMARY CARCINOMA OF THE OESOPHAGUS IN SOUTHERN NIGERIA

Dr Gandhi A. Anyanahun¹

Dr Stanley U. Okugbo²

^{1&2}Consultant Cardiothoracic Surgeons, Department of Surgery,
University of Benin Teaching Hospital, Benin City, Nigeria.

ABSTRACT

AIM: To document the presentation and epidemiology of oesophageal carcinoma in a Tertiary hospital in Southern Nigeria

METHOD: This was an 11 year retrospective study of all patients managed for oesophageal carcinoma in the University of Benin Teaching Hospital from January 2004 to December 2014.

RESULT: Seventy-six cases were seen, comprising of 58 males and 18 females, with a male to female ratio of 3.2:1. Most patients (55.3%) were within the 60 - 75 years age group; all patients (100%) presented with progressive dysphagia. The mean duration of symptoms at the time of presentation was 5.9 months (range 1-13 months). Sixty-two patients (82%) habitually ingested alcohol and or consumed tobacco. The most predominant cell type was squamous cell carcinoma (81.6%) while the most common location of the lesion was distal third of the thoracic oesophagus (51.9%), followed by middle third (29.9%). Forty three percent of the patients had surgical palliative treatment for the dysphagia. The average survival was 19.8 weeks. The longest survival was 16 months and 1 week.

CONCLUSION: Dysphagia and weight loss are the commonest symptoms of carcinoma of the oesophagus and late presentation for treatment is the norm.

Keyword: oesophageal cancer; dysphagia; Southern Nigeria

INTRODUCTION

Oesophageal carcinoma, is the commonest

primary tumor of the oesophagus¹. The incidence varies widely globally; areas with the highest rates are found in Southern and Eastern Africa and Eastern Asia. Although West Africa is considered a none endemic area for carcinoma of the oesophagus (globacan), the disease is not uncommon and is apparently increasing in incidence². The incidence in Lagos, Nigeria is 2.5% of gastrointestinal tumors.

The disease is commoner in adult rural males who present mainly with the squamous cell carcinoma (SCC) as distinct from Western Societies patients who have high incidence of oesophageal reflux disease and predominantly present with the adenocarcinoma subtype³⁻⁵.

The commonest presenting symptom of oesophageal carcinoma is dysphagia which is a late symptom¹. The other symptoms include weight loss, regurgitation, haematemesis and voice change. Patients commonly have respiratory infection from the regurgitation of food held up in the oesophagus. Cachexia from inanition is common⁶. Follow up of patients with premalignant diseases like achalasia, corrosive oesophageal stricture and Barrett Oesophagus with endoscopic surveillance results in early diagnosis and improved outcome.

The clinical history and physical examination are the main diagnostic tool, while Oesophagoscopy⁷ and barium swallow (though often not readily available) help to confirm the diagnosis. There are few reports of oesophageal carcinoma in Nigeria and mostly from the south western region⁸⁻¹¹

The need for early detection and referral is important as this would improve the prognosis. The purpose of this retrospective study is to demonstrate the various modes of presentation of carcinoma of the oesophagus, outlining the epidemiological factors seen in

Corresponding Author: Dr Gandhi A. Anyanahun
Department of Surgery,
University of Benin Teaching Hospital, PMB 1111,
Benin City, Nigeria. Phone: +234 802 336 8771
E-mail: anyanhunga@yahoo.com

the patients presenting in our tertiary hospital.

Patients and Methods

This is an 11years retrospective study spanning the period from January 2004 to December 2014. It involves the assessment of clinical records of all cases of carcinoma of the oesophagus who were treated in University of Benin Teaching Hospital in the period under review. The hospital serves as a Tertiary referral center for Edo state and the adjoining states of Ondo, Ekiti, Delta and Bayelsa; Located within the Niger Delta region of Nigeria.

The patients' data were gleaned from the hospital clinical records. Data gleaned included age, gender, mode of presentation, barium study films and report, CT scan and histology reports. The cases whose records were not retrieved were excluded from the study.

For the purpose of this study, oesophageal carcinoma was divided into three groups based on their location as:

✍ Upper 1/3 oesophageal carcinoma: Tumour located between proximal esophageal opening (C6, 15cm from the upper incisors, including cervical oesophagus) and 23cm from the upper incisors

✍ Middle 1/3 oesophageal carcinoma: Tumour located between the 23cm mark and the 32cm mark from the upper incisors

✍ Lower 1/3 oesophageal carcinoma: Tumour located between the 32cm mark to the 40cm mark or the gastro-oesophageal junction (including abdominal oesophagus).

✍ The histological types were classified as squamous cell carcinoma and adenocarcinoma, depending on the predominant malignant epithelial cell type.

The data were entered into the Statistical Package for Scientific Solutions (SPSS) version 21 and analysed. The results were presented in frequency tables.

Results

A total of 76 patients with carcinoma of the

oesophagus were seen during the study period, 58 (76%) were males and 18(24%) were females with a male female ratio of 3.2:1.

The patients' age ranged from 17years to 90years with a mean of 63.3years. (Figure 1). Most of the patients (55%) were within the 60 - 75 years.

Eighteen (24%) patients were permanent residents of Edo State and 27 patients (36%) from Delta state, while one patient was from Liberia. The other 30 (39%) patients did not have their permanent residence confirmed.

Dysphagia was seen in all patients, whilst 62 patients (81.6%) presented with weight loss. Other clinical feature are as presented in Table 1.

The mean duration of symptoms at presentation was 5.9 months. The mean duration of symptoms by the males and females at presentation were 6.4 and 3.8 months respectively. Forty-six patients had positive history of alcohol intake. A significant number of patients were also exposed to regular smoking, tobacco chewing or smoked fish ingestion (Table 2). Three patients were managed for Achalasia and one for peptic ulcer disease for years prior to their presentation.

All patients had barium studies which showed near total or total oesophageal obstruction (Figure 2).

The most common location of the tumour was distal third of the thoracic oesophagus in 40 patients (51.9%), followed by middle third with 23(29.9%). Five patients had upper third oesophageal carcinoma while in 8 patients the location was not indicated.

Of the 76 patients studied 52 patients had histology done. A significant number were too ill to have endoscopy done for biopsy, while some were lost to follow up, however a few refused any form of surgery when it was offered and so biopsy could not be done. Of the 52 patients that had histology done, 43 patients had SCC and 9 had adenocarcinoma. The mean duration of symptoms at presentation of patients with squamous cell and adenocarcinoma were 6.1 and 10.3

Figure 1: Age distribution of the oesophageal carcinoma patients

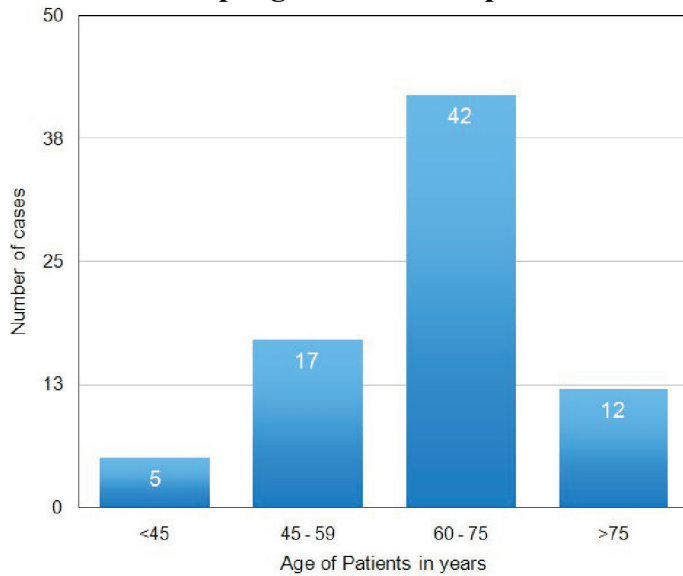


Figure 2: Barium Swallow showing Filling defect with shouldering

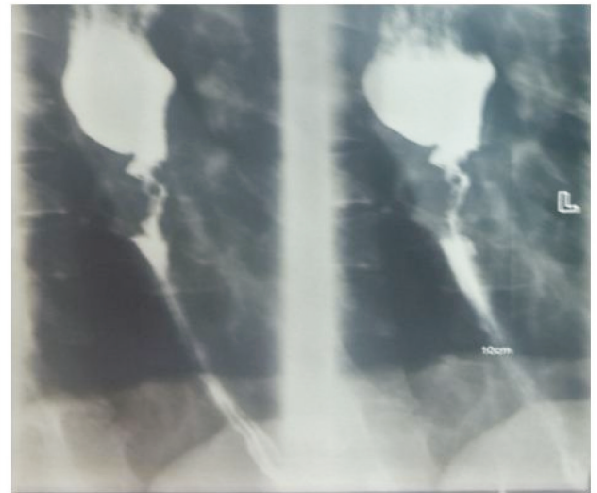


Table 1: Clinical features of the patients with carcinoma of the oesophagus

Clinical Features	Number of cases	Percentage of the case with the feature (%)
Dysphagia	76	100
Weight loss	62	82
Regurgitation	18	24
Chest Pain	18	24
Anorexia	13	17
Melena	3	4
Haematemesis	1	1

Table 2: Age distribution of the oesophageal carcinoma patients

Etiology	Number	Adenocarcinoma	Squamous Cell Carcinoma
Smoking/Tobacco/ smoked fish	48	2	33
Smoking/Tobacco/ Smoked fish and Alcohol	32	1	21
Alcohol	46	4	27
None	14	4	4
Total	76	9	43

months respectively. The average age of those with SCC was 61.9 years and that of those patients with adenocarcinoma was 58.6 years. Thirty-three patients (43%) had surgical palliation for dysphagia. Twenty-one of these patients had Mouseau-Barbin tube inserted, as this was the only stent readily available. Two patients had oesophagectomy with gastric pull up, and one had oesophagectomy with colonic replacement while another had oesophageal bypass with left colon, because the stomach couldn't be used because of the tumor around the celiac trunk. However 8 patients had only feeding gastrostomy performed on them because they were not fit for any other procedures to prevent inanition. These gastrostomies were done under local anesthesia. Four patients died within 30 days post operation. The longest survival was 16 months and 1 week. The average survival was 19.8 weeks.

Discussion

The number of cases and distribution in this study tallies with other reports from Nigeria and similar report from East Africa^{6,12}. Some reports did not find any gender differences in the incidence^{8,13}. However, like in this study, Jemal and Ajao et al did report a male predominance^{2,14}.

The mean age of the patients in this study was 63.3 years which is not very different from the report of other authors in Nigeria, Kenya, Japan and US^{2,15}. With life expectancy in Nigeria at 54 yrs as determined by WHO and UN partners, and this disease being essentially a disease of the elderly, many Nigerians may not live long enough to develop the disease^{6,16}. This could very well be a reason for the low incidence in Nigeria.

It is well established that the incidence of oesophageal carcinoma varies even within a country depending on the exposure to various risk factors which include alcohol consumption, low income and cigarette smoking^{17,18}. Most of the patients in this study with recorded permanent residential addresses have been residing in Delta State despite the location of the study center at Edo state. Further studies examining the

sociocultural environment within the state is required to determine the cause.

Significant alcohol consumption was noted in many patients, though many claimed to have stopped. This stoppage appears to be from the onset of significant dysphagia and illness. Alcohol (locally prepared gin) consumption is a common practice in the riverine delta region where it is readily, and commonly brewed. This may explain the apparent preponderance of patients from the delta. However, further study would be required to find out the actual cause for this apparent higher incidence in Delta state.

Progressive dysphagia was the most common presenting complaint. It is a late symptom and occurs when the tumor has involved more than 60% of the esophageal circumference. This is due to the lack of serosal covering on the oesophagus allowing for easy distention during swallowing until a very significant part of the oesophageal circumference is involved. Any recent history of dysphagia in an adult above the age of 40 years should therefore prompt endoscopy and/or a barium swallow to rule out esophageal carcinoma and other differentials like strictures, esophagitis and achalasia. Even with the onset of dysphagia, most of the patients in this study spent months before presenting at the study center. All patients were first seen in a private or government hospital prior to referral to the study center. There was evidence of delay in presentation, with many patients patronizing traditional medical practitioners and prayer houses. Various factors may be responsible for this finding. These factors may have been patient, family, health facility, economic or government related.

Although some patients in this study had been diagnosed with Achalasia and reflux esophagitis previously, none of these patients were followed up, and presented late. For early diagnosis, it is very important to screen patients with high risk for the development of carcinoma of the oesophagus. This obviously will involve the use of oesophagoscopy and surveillance in patients presenting with complaints of chronic history of non-cardiac retrosternal pain or discomfort (heart burn)

which is suggestive of reflux oesophagitis. Screening would allow early diagnosis of carcinoma of the oesophagus with higher probability of improved outcome and cure. Thus patients with Barrett's oesophagus and dysplasia should be followed up with oesophagoscopy surveillance for early detection and diagnosis of carcinoma of the oesophagus.

It is expected that patients who present with progressive dysphagia be offered oesophagoscopy as soon as possible because of the benefit of rapid definitive diagnosis which would assist in early commencement of therapy.

Patients who have history of corrosive strictures and had only dilatation as treatment should also be placed under surveillance since carcinoma of the oesophagus may develop even after ten years following the incidence¹⁹⁻²². Although long term follow up is a major challenge in developing countries like Nigeria where most people are not covered by health insurance and patients make payment directly from their income at the point of service, it should be encouraged as it gives the chance of early detection of malignant transformation.

Also, middle aged and elderly patients who present with food and foreign body oesophageal impaction should have oesophagoscopy done since the impaction may be a red herring.²³

Weight loss is usually due to inability to take adequate food as well as the presence of advanced malignancy in these patients. In many other reports, weight loss is either present in all the patients or it is the second commonest presenting symptom as found in this study,^{8,11}. It is pertinent to note, that many patients in this series developed cachexia before presenting for treatment. Patients with adenocarcinoma presented with a significantly longer symptomatic history in this study. Those who had adenocarcinoma were more likely to have had symptoms for a longer duration prior to presentation. This finding was found to be statistically

significant. This may be due to symptoms associated with the predisposing factors like reflux oesophagitis. This had deleterious effect both in the diagnosis and the treatment options available for the patients. It is not however surprising that most patients in this study (both adenocarcinoma and squamous cell carcinoma) had only palliation as the available option of treatment and fewer number were fit for any surgical palliation of their dysphagia. Clinical vigilance and prompt referrals are indeed imperative if the morbidity and or mortality must be improved. Diagnostic oesophagoscopy was available in the outpatient service (within the endoscopy suite) and theatre at the study center, and was offered to all patients except the few who were too ill from inanition or respiratory infection. This invariably afforded histological confirmation even for the many inoperable cases. It would be imperative that awake oesophagoscopy be available in the Niger delta to allow prompt, universal diagnostic assessment of all cases of dysphagia. This would definitely improve the care of such patients. Most of the patients had squamous cell carcinoma and this is consistent with findings worldwide unlike that seen in some western countries like USA. Although males tended to present much later after the onset of the symptoms in this study, this however was found not to be significant statistically.

Conclusion

Late presentation with complaint of dysphagia is still the common mode of presentation of oesophageal cancer in our community. The patients with adenocarcinoma tend to present with a longer duration of presenting symptoms. Late presentation has deleterious effect on diagnosis and the available treatment options. High index of suspicion in cases of elderly patients with dysphagia may improve outcome. Screening for patients with predisposing factors like achalasia and reflux oesophagitis may help to identify early cases for curative surgery

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